

SEQUENCE LISTING

<110> Saxon, Andrew
Zhang, Ke
Zhu, Daocheng

<120> FUSION MOLECULES AND TREATMENT OF
IgE-MEDIATED ALLERGIC DISEASES

<130> UC67.002A

<160> 177

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 696

<212> DNA

<213> Homo sapiens

<400> 1

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<210> 2

<211> 330

<212> PRT

<213> Homo sapiens

<400> 2

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 20          25          30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35          40          45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50          55          60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 65          70          75          80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85          90          95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 100         105         110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 115         120         125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
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Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
 195 200 205
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Gln Gln Arg
 210 215 220
 Ser Leu Ser Leu Ser Pro Gly Lys
 225 230

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 <213> Homo sapiens

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 cagaagcact ggctgtcaga ccgcacctac acctgccagg tcacctatca aggtcacacc 600
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 agggc 1445

<210> 5
 <211> 427
 <212> PRT
 <213> Homo sapiens

<400> 5
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 Ile Pro Ser Asn Ala Thr Ser Val Thr Leu Gly Cys Leu Ala Thr Gly
 20 25 30
 Tyr Phe Pro Glu Pro Val Met Val Thr Trp Asp Thr Gly Ser Leu Asn
 35 40 45
 Gly Thr Thr Met Thr Leu Pro Ala Thr Thr Leu Thr Leu Ser Gly His
 50 55 60
 Tyr Ala Thr Ile Ser Leu Leu Thr Val Ser Gly Ala Trp Ala Lys Gln
 65 70 75 80
 Met Phe Thr Cys Arg Val Ala His Thr Pro Ser Ser Thr Asp Trp Val

Asp	Asn	Lys	Thr	85	Phe	Ser	Val	Cys	Ser	90	Arg	Asp	Phe	Thr	95	Pro	Pro	Thr
			100						105						110			
Val	Lys	Ile	Leu	Gln	Ser	Ser	Cys	Asp	Gly	Gly	Gly	Gly	His	Phe	Pro	Pro		
		115					120						125					
Thr	Ile	Gln	Leu	Leu	Cys	Leu	Val	Ser	Gly	Tyr	Thr	Pro	Gly	Thr	Ile			
	130					135						140						
Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met	Asp	Val	Asp	Leu	Ser			
145					150					155					160			
Thr	Ala	Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala	Ser	Thr	Gln	Ser	Glu			
				165					170					175				
Leu	Thr	Leu	Ser	Gln	Lys	His	Trp	Leu	Ser	Asp	Arg	Thr	Tyr	Thr	Cys			
		180						185					190					
Gln	Val	Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp	Ser	Thr	Lys	Lys	Cys			
	195						200					205						
Ala	Asp	Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr	Leu	Ser	Arg	Pro	Ser			
	210					215					220							
Pro	Phe	Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr	Ile	Thr	Cys	Leu	Val			
225					230					235					240			
Val	Asp	Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn	Leu	Thr	Trp	Ser	Arg			
				245					250					255				
Ala	Ser	Gly	Lys	Pro	Val	Asn	His	Ser	Thr	Arg	Lys	Glu	Glu	Lys	Gln			
			260						265				270					
Arg	Asn	Gly	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu	Pro	Val	Gly	Thr	Arg			
	275						280					285						
Asp	Trp	Ile	Glu	Gly	Glu	Thr	Tyr	Gln	Cys	Arg	Val	Thr	His	Pro	His			
	290					295					300							
Leu	Pro	Arg	Ala	Leu	Met	Arg	Ser	Thr	Thr	Lys	Thr	Ser	Gly	Pro	Arg			
305					310					315					320			
Ala	Ala	Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro	Glu	Trp	Pro	Gly	Ser			
				325					330					335				
Arg	Asp	Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln	Asn	Phe	Met	Pro	Glu			
		340						345				350						
Asp	Ile	Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val	Gln	Leu	Pro	Asp	Ala			
	355						360					365						
Arg	His	Ser	Thr	Thr	Gln	Pro	Arg	Lys	Thr	Lys	Gly	Ser	Gly	Phe	Phe			
	370					375					380							
Val	Phe	Ser	Arg	Leu	Glu	Val	Thr	Arg	Ala	Glu	Trp	Glu	Gln	Lys	Asp			
385					390					395					400			
Glu	Phe	Ile	Cys	Arg	Ala	Val	His	Glu	Ala	Ala	Ser	Pro	Ser	Gln	Thr			
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<210> 6
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 6
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 Gly His Phe Pro Pro Thr Ile Gln Leu Leu Cys Leu Val Ser Gly Tyr
 20 25 30
 Thr Pro Gly Thr Ile Asn Ile Thr Trp Leu Glu Asp Gly Gln Val Met
 35 40 45

Asn	Trp	Met	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala
Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Val	Gln	Pro
Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr
Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser
Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr
Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Val	Gly	Ser	Phe	Phe	Leu	Tyr
Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe
Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Gln	Gln	Arg
Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys	Val	Glu	Gly	Gly	Gly	Gly	Ser	Gly
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Phe	Thr	Pro	Pro	Thr	Val	Lys
Ile	Leu	Gln	Ser	Ser	Cys	Asp	Gly	Gly	Gly	His	Phe	Pro	Pro	Thr	Ile
Gln	Leu	Leu	Cys	Leu	Val	Ser	Gly	Tyr	Thr	Pro	Gly	Thr	Ile	Asn	Ile
Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met	Asp	Val	Asp	Leu	Ser	Thr	Ala
Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala	Ser	Thr	Gln	Ser	Glu	Leu	Thr
Leu	Ser	Gln	Lys	His	Trp	Leu	Ser	Asp	Arg	Thr	Tyr	Thr	Cys	Gln	Val
Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp	Ser	Thr	Lys	Lys	Cys	Ala	Asp
Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr	Leu	Ser	Arg	Pro	Ser	Pro	Phe
Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr	Ile	Thr	Cys	Leu	Val	Val	Asp
Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn	Leu	Thr	Trp	Ser	Arg	Ala	Ser
Gly	Lys	Pro	Val	Asn	His	Ser	Thr	Arg	Lys	Glu	Glu	Lys	Gln	Arg	Asn
Gly	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu	Pro	Val	Gly	Thr	Arg	Asp	Trp
Ile	Glu	Gly	Glu	Thr	Tyr	Gln	Cys	Arg	Val	Thr	His	Pro	His	Leu	Pro
Arg	Ala	Leu	Met	Arg	Ser	Thr	Thr	Lys	Thr	Ser	Gly	Pro	Arg	Ala	Ala
Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro	Glu	Trp	Pro	Gly	Ser	Arg	Asp
Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln	Asn	Phe	Met	Pro	Glu	Asp	Ile
Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val	Gln	Leu	Pro	Asp	Ala	Arg	His
Ser	Thr	Thr	Gln	Pro	Arg	Lys	Thr	Lys	Gly	Ser	Gly	Phe	Phe	Val	Phe
Ser	Arg	Leu	Glu	Val	Thr	Arg	Ala	Glu	Trp	Glu	Gln	Lys	Asp	Glu	Phe

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 Arg Ala Val Ser Val Asn Pro Gly Lys
 565

<210> 8
 <211> 159
 <212> PRT
 <213> *Alnus glutinosa* (Alder)

<220>

<400> 8
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 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Lys Leu Leu Pro Lys
 20 25 30
 Val Ala Pro Glu Ala Val Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp Arg Val Asn Phe Lys
 65 70 75 80
 Tyr Ser Phe Ser Val Ile Glu Gly Gly Ala Val Gly Asp Ala Leu Glu
 85 90 95
 Lys Val Cys Asn Glu Ile Lys Ile Val Ala Ala Pro Asp Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Asn Lys Phe His Thr Lys Gly Asp His Glu Ile
 115 120 125
 Asn Ala Glu Gln Ile Lys Ile Glu Lys Glu Lys Ala Val Gly Leu Leu
 130 135 140
 Lys Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 9
 <211> 113
 <212> PRT
 <213> *Alternaria alternata*

<400> 9
 Met Lys His Leu Ala Ala Tyr Leu Leu Leu Gly Leu Gly Gly Asn Thr
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 Ser Pro Ser Ala Ala Asp Val Lys Ala Val Leu Glu Ser Val Gly Ile
 20 25 30
 Glu Ala Asp Ser Asp Arg Leu Asp Lys Leu Ile Ser Glu Leu Glu Gly
 35 40 45
 Lys Asp Ile Asn Glu Leu Ile Ala Ser Gly Ser Glu Lys Leu Ala Ser
 50 55 60
 Val Pro Ser Gly Gly Ala Gly Gly Ala Ala Ala Ser Gly Gly Ala Ala
 65 70 75 80
 Ala Ala Gly Gly Ser Ala Gln Ala Glu Ala Ala Pro Glu Ala Ala Lys
 85 90 95
 Glu Glu Glu Lys Glu Glu Ser Asp Glu Asp Met Gly Phe Gly Leu Phe
 100 105 110
 Asp

<210> 10
 <211> 204
 <212> PRT
 <213> Alternaria alternata

<400> 10
 Met Ala Pro Lys Ile Ala Ile Val Tyr Tyr Ser Met Tyr Gly His Ile
 1 5 10 15
 Lys Lys Met Ala Asp Ala Glu Leu Lys Gly Ile Gln Glu Ala Gly Gly
 20 25 30
 Asp Ala Lys Leu Phe Gln Val Ala Glu Thr Leu Pro Gln Glu Val Leu
 35 40 45
 Asp Lys Met Tyr Ala Pro Pro Lys Asp Ser Ser Val Pro Val Leu Glu
 50 55 60
 Asp Pro Ala Val Leu Glu Glu Phe Asp Gly Ile Leu Phe Gly Ile Pro
 65 70 75 80
 Thr Arg Tyr Gly Asn Phe Pro Ala Gln Phe Lys Thr Phe Trp Asp Lys
 85 90 95
 Thr Gly Lys Gln Trp Gln Gln Gly Ala Phe Trp Gly Lys Tyr Ala Gly
 100 105 110
 Val Phe Val Ser Thr Gly Thr Leu Gly Gly Gly Gln Glu Thr Thr Ala
 115 120 125
 Ile Thr Ser Met Ser Thr Leu Val Asp His Gly Phe Ile Tyr Val Pro
 130 135 140
 Leu Gly Tyr Lys Thr Ala Phe Ser Met Leu Ala Asn Leu Asp Glu Val
 145 150 155 160
 His Gly Gly Ser Pro Trp Gly Ala Gly Thr Phe Ser Ala Gly Asp Gly
 165 170 175
 Ser Arg Gln Pro Ser Glu Leu Glu Leu Asn Ile Ala Gln Ala Gln Gly
 180 185 190
 Lys Ala Phe Tyr Glu Ala Val Ala Lys Ala His Gln
 195 200

<210> 11
 <211> 495
 <212> PRT
 <213> Alternaria alternata

<400> 11
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 Pro Thr Gly Leu Phe Ile Asn Asn Glu Phe Val Lys Ala Val Asp Gly
 20 25 30
 Lys Thr Phe Asp Val Ile Asn Pro Ser Thr Glu Glu Val Ile Cys Ser
 35 40 45
 Val Gln Glu Ala Thr Glu Lys Asp Val Asp Ile Ala Val Ala Ala Ala
 50 55 60
 Arg Lys Ala Phe Asn Gly Pro Trp Ala Lys Glu Thr Pro Glu Asn Arg
 65 70 75 80
 Gly Lys Leu Leu Asn Lys Leu Ala Asp Leu Phe Glu Lys Asn Ala Asp
 85 90 95
 Leu Ile Ala Ala Val Glu Ala Leu Asp Asn Gly Lys Ala Phe Ser Met
 100 105 110

Tyr	Asp	Lys	Trp	Gly	Ser	Tyr	Ala	Ile	Gly	Gly	Ser	Ala	Ser	Pro	Thr
290						295					300				
Ile	Leu	Ser	Gln	Gly	Asn	Arg	Phe	Cys	Ala	Pro	Asp	Glu	Arg	Ser	Lys
305					310					315					320
Lys	Asn	Val	Leu	Gly	Arg	His	Gly	Glu	Ala	Ala	Ala	Glu	Ser	Met	Lys
				325					330					335	
Trp	Asn	Trp	Arg	Thr	Asn	Lys	Asp	Val	Leu	Glu	Asn	Gly	Ala	Ile	Phe
			340					345					350		
Val	Ala	Ser	Gly	Val	Asp	Pro	Val	Leu	Thr	Pro	Glu	Gln	Ser	Ala	Gly
		355					360					365			
Met	Ile	Pro	Ala	Glu	Pro	Gly	Glu	Ser	Ala	Leu	Ser	Leu	Thr	Ser	Ser
370						375					380				
Ala	Gly	Val	Leu	Ser	Cys	Gln	Pro	Gly	Ala	Pro	Cys				
385					390					395					

<210> 14
 <211> 398
 <212> PRT
 <213> *Ambrosia artemisiifolia* (Short ragweed)

<400> 14

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Val	Thr	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Gln	Asp	Val	Glu	Glu	Phe
			20					25					30		
Leu	Pro	Ser	Ala	Asn	Glu	Thr	Arg	Arg	Ser	Leu	Lys	Ala	Cys	Glu	Ala
			35				40					45			
His	Asn	Ile	Ile	Asp	Lys	Cys	Trp	Arg	Cys	Lys	Ala	Asp	Trp	Ala	Asn
50						55					60				
Asn	Arg	Gln	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Ala	Lys	Gly	Thr
65					70					75					80
Tyr	Gly	Gly	Lys	His	Gly	Asp	Val	Tyr	Thr	Val	Thr	Ser	Asp	Lys	Asp
				85					90					95	
Asp	Asp	Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Ala	Ala	Ala
			100					105					110		
Gln	Asn	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Lys	Arg	Asn	Met	Val	Ile	His
			115				120					125			
Leu	Asn	Gln	Glu	Leu	Val	Val	Asn	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg
			130				135				140				
Gly	Val	Lys	Val	Asn	Ile	Val	Asn	Ala	Gly	Leu	Thr	Leu	Met	Asn	Val
145					150					155				160	
Lys	Asn	Ile	Ile	Ile	His	Asn	Ile	Asn	Ile	His	Asp	Ile	Lys	Val	Cys
				165					170					175	
Pro	Gly	Gly	Met	Ile	Lys	Ser	Asn	Asp	Gly	Pro	Pro	Ile	Leu	Arg	Gln
			180					185					190		
Gln	Ser	Asp	Gly	Asp	Ala	Ile	Asn	Val	Ala	Gly	Ser	Ser	Gln	Ile	Trp
		195					200					205			
Ile	Asp	His	Cys	Ser	Leu	Ser	Lys	Ala	Ser	Asp	Gly	Leu	Leu	Asp	Ile
210						215					220				
Thr	Leu	Gly	Ser	Ser	His	Val	Thr	Val	Ser	Asn	Cys	Lys	Phe	Thr	Gln
225					230					235					240
His	Gln	Phe	Val	Leu	Leu	Leu	Gly	Ala	Asp	Asp	Thr	His	Tyr	Gln	Asp
				245					250					255	
Lys	Gly	Met	Leu	Ala	Thr	Val	Ala	Phe	Asn	Met	Phe	Thr	Asp	His	Val
			260					265					270		
Asp	Gln	Arg	Met	Pro	Arg	Cys	Arg	Phe	Gly	Phe	Phe	Gln	Val	Val	Asn

Asn	Asn	Tyr	Asp	Arg	Trp	Gly	Thr	Tyr	Ala	Ile	Gly	Gly	Ser	Ser	Ala
290						295					300				
Pro	Thr	Ile	Leu	Ser	Gln	Gly	Asn	Arg	Phe	Phe	Ala	Pro	Asp	Asp	Ile
305					310					315					320
Ile	Lys	Lys	Asn	Val	Leu	Ala	Arg	Thr	Gly	Thr	Gly	Asn	Ala	Glu	Ser
				325					330					335	
Met	Ser	Trp	Asn	Trp	Arg	Thr	Asp	Arg	Asp	Leu	Leu	Glu	Asn	Gly	Ala
			340					345					350		
Ile	Phe	Leu	Pro	Ser	Gly	Ser	Asp	Pro	Val	Leu	Thr	Pro	Glu	Gln	Lys
	355						360					365			
Ala	Gly	Met	Ile	Pro	Ala	Glu	Pro	Gly	Glu	Ala	Val	Leu	Arg	Leu	Thr
	370					375					380				
Ser	Ser	Ala	Gly	Val	Leu	Ser	Cys	His	Gln	Gly	Ala	Pro	Cys		
385					390					395					

<210> 15
 <211> 397
 <212> PRT
 <213> Ambrosia artemisiifolia (Short ragweed)

Met	Gly	Ile	Lys	Gln	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu
1				5					10					15	
Val	Ala	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Glu	Gly	Val	Gly	Glu	Ile
		20						25					30		
Leu	Pro	Ser	Val	Asn	Glu	Thr	Arg	Ser	Leu	Gln	Ala	Cys	Glu	Ala	Leu
		35					40					45			
Asn	Ile	Ile	Asp	Lys	Cys	Trp	Arg	Gly	Lys	Ala	Asp	Trp	Glu	Asn	Asn
50						55					60				
Arg	Gln	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Ala	Lys	Gly	Thr	Tyr
65				70						75					80
Gly	Gly	Lys	Trp	Gly	Asp	Val	Tyr	Thr	Val	Thr	Ser	Asn	Leu	Asp	Asp
				85					90					95	
Asp	Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Ala	Ala	Ala	Gln
			100					105					110		
Asn	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Lys	Asn	Asp	Met	Val	Ile	Asn	Leu
		115					120					125			
Asn	Gln	Glu	Leu	Val	Val	Asn	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly
		130				135					140				
Val	Lys	Val	Glu	Ile	Ile	Asn	Gly	Gly	Leu	Thr	Leu	Met	Asn	Val	Lys
145				150						155					160
Asn	Ile	Ile	Ile	His	Asn	Ile	Asn	Ile	His	Asp	Val	Lys	Val	Leu	Pro
				165					170					175	
Gly	Gly	Met	Ile	Lys	Ser	Asn	Asp	Gly	Pro	Pro	Ile	Leu	Arg	Gln	Ala
		180						185					190		
Ser	Asp	Gly	Asp	Thr	Ile	Asn	Val	Ala	Gly	Ser	Ser	Gln	Ile	Trp	Ile
		195					200					205			
Asp	His	Cys	Ser	Leu	Ser	Lys	Ser	Phe	Asp	Gly	Leu	Val	Asp	Val	Thr
	210					215					220				
Leu	Gly	Ser	Thr	His	Val	Thr	Ile	Ser	Asn	Cys	Lys	Phe	Thr	Gln	Gln
225				230						235					240
Ser	Lys	Ala	Ile	Leu	Leu	Gly	Ala	Asp	Asp	Thr	His	Val	Gln	Asp	Lys
				245				250						255	
Gly	Met	Leu	Ala	Thr	Val	Ala	Phe	Asn	Met	Phe	Thr	Asp	Asn	Val	Asp
			260					265					270		

Asn	Leu	Arg	His	Gly	Phe	Val	Gln	Val	Val	Asn	Asn	Asn	Tyr	Glu	Arg
		275					280					285			
Trp	Gly	Ser	Tyr	Ala	Leu	Gly	Gly	Ser	Ala	Gly	Pro	Thr	Ile	Leu	Ser
	290					295					300				
Gln	Gly	Asn	Arg	Phe	Leu	Ala	Ser	Asp	Ile	Lys	Lys	Glu	Val	Val	Gly
305					310					315					320
Arg	Tyr	Gly	Glu	Ser	Ala	Met	Ser	Glu	Ser	Ile	Asn	Trp	Asn	Trp	Arg
			325					330						335	
Ser	Tyr	Met	Asp	Val	Phe	Glu	Asn	Gly	Ala	Ile	Phe	Val	Pro	Ser	Gly
			340					345					350		
Val	Asp	Pro	Val	Leu	Thr	Pro	Glu	Gln	Asn	Ala	Gly	Met	Ile	Pro	Ala
		355					360					365			
Glu	Pro	Gly	Glu	Ala	Val	Leu	Arg	Leu	Thr	Ser	Ser	Ala	Gly	Val	Leu
	370					375					380				
Ser	Cys	Gln	Pro	Gly	Ala	Pro	Cys								
385					390										

<210> 17
 <211> 397
 <212> PRT
 <213> Ambrosia artemisiifolia (Short ragweed)

Met	Gly	Ile	Lys	His	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu
1				5					10					15	
Val	Thr	Leu	Val	Gln	Ala	Gly	Arg	Leu	Gly	Glu	Glu	Val	Asp	Ile	Leu
		20						25					30		
Pro	Ser	Pro	Asn	Asp	Thr	Arg	Arg	Ser	Leu	Gln	Gly	Cys	Glu	Ala	His
		35					40					45			
Asn	Ile	Ile	Asp	Lys	Cys	Trp	Arg	Cys	Lys	Pro	Asp	Trp	Ala	Glu	Asn
	50					55					60				
Arg	Gln	Ala	Leu	Gly	Asn	Cys	Ala	Gln	Gly	Phe	Gly	Lys	Ala	Thr	His
65					70				75					80	
Gly	Gly	Lys	Trp	Gly	Asp	Ile	Tyr	Met	Val	Thr	Ser	Asp	Gln	Asp	Asp
			85					90					95		
Asp	Val	Val	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Gly	Ala	Thr	Gln
			100					105					110		
Asp	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Gln	Arg	Asp	Met	Ile	Ile	Tyr	Leu
		115				120						125			
Gln	Gln	Glu	Met	Val	Val	Thr	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly
	130					135					140				
Ala	Lys	Val	Glu	Leu	Val	Tyr	Gly	Gly	Ile	Thr	Leu	Met	Asn	Val	Lys
145					150				155					160	
Asn	Val	Ile	Ile	His	Asn	Ile	Asp	Ile	His	Asp	Val	Arg	Val	Leu	Pro
			165					170						175	
Gly	Gly	Arg	Ile	Lys	Ser	Asn	Gly	Gly	Pro	Ala	Ile	Pro	Arg	His	Gln
		180						185					190		
Ser	Asp	Gly	Asp	Ala	Ile	His	Val	Thr	Gly	Ser	Ser	Asp	Ile	Trp	Ile
		195				200						205			
Asp	His	Cys	Thr	Leu	Ser	Lys	Ser	Phe	Asp	Gly	Leu	Val	Asp	Val	Asn
	210					215					220				
Trp	Gly	Ser	Thr	Gly	Val	Thr	Ile	Ser	Asn	Cys	Lys	Phe	Thr	His	His
225					230				235					240	
Glu	Lys	Ala	Val	Leu	Leu	Gly	Ala	Ser	Asp	Thr	His	Phe	Gln	Asp	Leu
				245					250					255	

<211> 77
 <212> PRT
 <213> Ambrosia psilostachya (Western ragweed)

<400> 20
 Met Asn Asn Glu Lys Asn Val Ser Phe Glu Phe Ile Gly Ser Thr Asp
 1 5 10 15
 Glu Val Asp Glu Ile Lys Leu Leu Pro Cys Ala Trp Ala Gly Asn Val
 20 25 30
 Cys Gly Glu Lys Arg Ala Tyr Cys Cys Ser Asp Pro Gly Arg Tyr Cys
 35 40 45
 Pro Trp Gln Val Val Cys Tyr Glu Ser Ser Glu Ile Cys Ser Gln Lys
 50 55 60
 Cys Gly Lys Met Arg Met Asn Val Thr Lys Asn Thr Ile
 65 70 75

<210> 21
 <211> 77
 <212> PRT
 <213> Ambrosia psilostachya (Western ragweed)

<400> 21
 Met Asn Asn Glu Lys Asn Val Ser Phe Glu Phe Ile Gly Ser Thr Asn
 1 5 10 15
 Glu Val Asp Glu Ile Lys Val Met Ala Cys Tyr Ala Ala Gly Ser Ile
 20 25 30
 Cys Gly Glu Lys Arg Gly Tyr Cys Ser Ser Asp Pro Gly Arg Tyr Cys
 35 40 45
 Pro Trp Gln Val Val Cys Tyr Glu Ser Arg Lys Ile Cys Ala Lys Asn
 50 55 60
 Ala Ala Lys Met Arg Met Asn Val Thr Lys Asn Thr Ile
 65 70 75

<210> 22
 <211> 73
 <212> PRT
 <213> Ambrosia trifida (Giant ragweed)

<400> 22
 Met Lys Asn Ile Phe Met Leu Thr Leu Phe Ile Leu Ile Ile Thr Ser
 1 5 10 15
 Thr Ile Lys Ala Ile Gly Ser Thr Asn Glu Val Asp Glu Ile Lys Gln
 20 25 30
 Glu Asp Asp Gly Leu Cys Tyr Glu Gly Thr Asn Cys Gly Lys Val Gly
 35 40 45
 Lys Tyr Cys Cys Ser Pro Ile Gly Lys Tyr Cys Val Cys Tyr Asp Ser
 50 55 60
 Lys Ala Ile Cys Asn Lys Asn Cys Thr
 65 70

<210> 23
 <211> 154
 <212> PRT
 <213> um graveolens (Celery)

(1)	(2)	(3)	(4)	(5)	(6)
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102
103	104	105	106	107	108
109	110	111	112	113	114
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121	122	123	124	125	126
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145	146	147	148	149	150
151	152	153	154	155	156
157	158	159	160	161	162
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175	176	177	178	179	180
181	182	183	184	185	186
187	188	189	190	191	192
193	194	195	196	197	198
199	200	201	202	203	204
205	206	207	208	209	210
211	212	213	214	215	216
217	218	219	220	221	222
223	224	225	226	227	228
229	230	231	232	233	234
235	236	237	238	239	240
241	242	243	244	245	246
247	248	249	250	251	252
253	254	255	256	257	258
259	260	261	262	263	264
265	266	267	268	269	270
271	272	273	274	275	276
277	278	279	280	281	282
283	284	285	286	287	288
289	290	291	292	293	294
295	296	297	298	299	300
301	302	303	304	305	306
307	308	309	310	311	312
313	314	315	316	317	318
319	320	321	322	323	324
325	326	327	328	329	330
331	332	333	334	335	336
337	338	339	340	341	342
343	344	345	346	347	348
349	350	351	352	353	354
355	356	357	358	359	360
361	362	363	364	365	366
367	368	369	370	371	372
373	374	375	376	377	378
379	380	381	382	383	384
385	386	387	388	389	390
391	392	393	394	395	396
397	398	399	400	401	402
403	404	405	406	407	408
409	410	411	412	413	414
415	416	417	418	419	420
421	422	423	424	425	426
427	428	429	430	431	432
433	434	435	436	437	438
439	440	441	442	443	444
445	446	447	448	449	450
451	452	453	454	455	456
457	458	459	460	461	462
463	464	465	466	467	468
469	470	471			

<210> 24

<212> PRT

<210> 25

<212> PRT

<213> Apis mellifera (Honeybee)

<400> 25

Met Ser Arg Pro Leu Val Ile Thr Glu Gly Met Met Ile Gly Val Leu
1 5 10 15
Leu Met Leu Ala Pro Ile Asn Ala Leu Leu Leu Gly Phe Val Gln Ser
20 25 30
Thr Pro Asp Asn Asn Lys Thr Val Arg Glu Phe Asn Val Tyr Trp Asn
35 40 45
Val Pro Thr Phe Met Cys His Lys Tyr Gly Leu Arg Phe Glu Glu Val
50 55 60
Ser Glu Lys Tyr Gly Ile Leu Gln Asn Trp Met Asp Lys Phe Arg Gly
65 70 75 80
Glu Glu Ile Ala Ile Leu Tyr Asp Pro Gly Met Phe Pro Ala Leu Leu
85 90 95
Lys Asp Pro Asn Gly Asn Val Val Ala Arg Asn Gly Gly Val Pro Gln
100 105 110
Leu Gly Asn Leu Thr Lys His Leu Gln Val Phe Arg Asp His Leu Ile
115 120 125
Asn Gln Ile Pro Asp Lys Ser Phe Pro Gly Val Gly Val Ile Asp Phe
130 135 140
Glu Ser Trp Arg Pro Ile Phe Arg Gln Asn Trp Ala Ser Leu Gln Pro
145 150 155 160
Tyr Lys Lys Leu Ser Val Glu Val Val Arg Arg Glu His Pro Phe Trp
165 170 175
Asp Asp Gln Arg Val Glu Gln Glu Ala Lys Arg Arg Phe Glu Lys Tyr
180 185 190
Gly Gln Leu Phe Met Glu Glu Thr Leu Lys Ala Ala Lys Arg Met Arg
195 200 205
Pro Ala Ala Asn Trp Gly Tyr Tyr Ala Tyr Pro Tyr Cys Tyr Asn Leu
210 215 220
Thr Pro Asn Gln Pro Ser Ala Gln Cys Glu Ala Thr Thr Met Gln Glu
225 230 235 240
Asn Asp Lys Met Ser Trp Leu Phe Glu Ser Glu Asp Val Leu Leu Pro
245 250 255
Ser Val Tyr Leu Arg Trp Asn Leu Thr Ser Gly Glu Arg Val Gly Leu
260 265 270
Val Gly Gly Arg Val Lys Glu Ala Leu Arg Ile Ala Arg Gln Met Thr
275 280 285
Thr Ser Arg Lys Lys Val Leu Pro Tyr Tyr Trp Tyr Lys Tyr Gln Asp
290 295 300
Arg Arg Asp Thr Asp Leu Ser Arg Ala Asp Leu Glu Ala Thr Leu Arg
305 310 315 320
Lys Ile Thr Asp Leu Gly Ala Asp Gly Phe Ile Ile Trp Gly Ser Ser
325 330 335
Asp Asp Ile Asn Thr Lys Ala Lys Cys Leu Gln Phe Arg Glu Tyr Leu
340 345 350
Asn Asn Glu Leu Gly Pro Ala Val Lys Arg Ile Ala Leu Asn Asn Asn
355 360 365
Ala Asn Asp Arg Leu Thr Val Asp Val Ser Val Asp Gln Val
370 375 380

<210> 26

<211> 70

<212> PRT

<213> Apis mellifera (Honeybee) Apis cerana (Ind. honeybee)

<400> 26

Met Lys Phe Leu Val Asn Val Ala Leu Val Phe Met Val Val Tyr Ile
1 5 10 15
Ser Tyr Ile Tyr Ala Ala Pro Glu Pro Glu Pro Ala Pro Glu Pro Glu
20 25 30
Ala Glu Ala Asp Ala Glu Ala Asp Pro Glu Ala Gly Ile Gly Ala Val
35 40 45
Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu Ile Ser Trp Ile Lys
50 55 60
Arg Lys Arg Gln Gln Gly
65 70

<210> 27

<211> 614

<212> PRT

<213> Arachis hypogaea (Peanut)

<400> 27

Met Arg Gly Arg Val Ser Pro Leu Met Leu Leu Leu Gly Ile Leu Val
1 5 10 15
Leu Ala Ser Val Ser Ala Thr Gln Ala Lys Ser Pro Tyr Arg Lys Thr
20 25 30
Glu Asn Pro Cys Ala Gln Arg Cys Leu Gln Ser Cys Gln Gln Glu Pro
35 40 45
Asp Asp Leu Lys Gln Lys Ala Cys Glu Ser Arg Cys Thr Lys Leu Glu
50 55 60
Tyr Asp Pro Arg Cys Val Tyr Asp Thr Gly Ala Thr Asn Gln Arg His
65 70 75 80
Pro Pro Gly Glu Arg Thr Arg Gly Arg Gln Pro Gly Asp Tyr Asp Asp
85 90 95
Asp Arg Arg Gln Pro Arg Arg Glu Glu Gly Gly Arg Trp Gly Pro Ala
100 105 110
Glu Pro Arg Glu Arg Glu Arg Glu Glu Asp Trp Arg Gln Pro Arg Glu
115 120 125
Asp Trp Arg Arg Pro Ser His Gln Gln Pro Arg Lys Ile Arg Pro Glu
130 135 140
Gly Arg Glu Gly Glu Gln Glu Trp Gly Thr Pro Gly Ser Glu Val Arg
145 150 155 160
Glu Glu Thr Ser Arg Asn Asn Pro Phe Tyr Phe Pro Ser Arg Arg Phe
165 170 175
Ser Thr Arg Tyr Gly Asn Gln Asn Gly Arg Ile Arg Val Leu Gln Arg
180 185 190
Phe Asp Gln Arg Ser Lys Gln Phe Gln Asn Leu Gln Asn His Arg Ile
195 200 205
Val Gln Ile Glu Ala Arg Pro Asn Thr Leu Val Leu Pro Lys His Ala
210 215 220
Asp Ala Asp Asn Ile Leu Val Ile Gln Gln Gly Gln Ala Thr Val Thr
225 230 235 240
Val Ala Asn Gly Asn Asn Arg Lys Ser Phe Asn Leu Asp Glu Gly His
245 250 255
Ala Leu Arg Ile Pro Ser Gly Phe Ile Ser Tyr Ile Leu Asn Arg His
260 265 270
Asp Asn Gln Asn Leu Arg Val Ala Lys Ile Ser Met Pro Val Asn Thr
275 280 285
Pro Gly Gln Phe Glu Asp Phe Phe Pro Ala Ser Ser Arg Asp Gln Ser

515 520 525
 Leu Gly Phe Gly Ile Asn Ala Glu Asn Asn His Arg Ile Phe Leu Ala
 530 535 540
 Gly Asp Lys Asp Asn Val Ile Asp Gln Ile Glu Lys Gln Ala Lys Asp
 545 550 555 560
 Leu Ala Phe Pro Gly Ser Gly Glu Gln Val Glu Lys Leu Ile Lys Asn
 565 570 575
 Gln Lys Glu Ser His Phe Val Ser Ala Arg Pro Gln Ser Gln Ser Gln
 580 585 590
 Ser Pro Ser Ser Pro Glu Lys Glu Ser Pro Glu Lys Glu Asp Gln Glu
 595 600 605
 Glu Glu Asn Gln Gly Gly Lys Gly Pro Leu Leu Ser Ile Leu Lys Ala
 610 615 620
 Phe Asn
 625

<210> 29
 <211> 131
 <212> PRT
 <213> Arabidopsis thaliana (Mouse-ear cress)

<400> 29
 Met Ser Trp Gln Ser Tyr Val Asp Asp His Leu Met Cys Asp Val Glu
 1 5 10 15
 Gly Asn His Leu Thr Ala Ala Ala Ile Leu Gly Gln Asp Gly Ser Val
 20 25 30
 Trp Ala Gln Ser Ala Lys Phe Pro Gln Leu Lys Pro Gln Glu Ile Asp
 35 40 45
 Gly Ile Lys Lys Asp Phe Glu Glu Pro Gly Phe Leu Ala Pro Thr Gly
 50 55 60
 Leu Phe Leu Gly Gly Glu Lys Tyr Met Val Ile Gln Gly Glu Gln Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Ile Lys Lys
 85 90 95
 Thr Asn Gln Ala Leu Val Phe Gly Phe Tyr Asp Glu Pro Met Thr Gly
 100 105 110
 Gly Gln Cys Asn Leu Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Glu
 115 120 125
 Ser Glu Leu
 130

<210> 30
 <211> 176
 <212> PRT
 <213> Aspergillus restrictus Aspergillus fumigatus

<400> 30
 Met Val Ala Ile Lys Asn Leu Phe Leu Leu Ala Ala Thr Ala Val Ser
 1 5 10 15
 Val Leu Ala Ala Pro Ser Pro Leu Asp Ala Arg Ala Thr Trp Thr Cys
 20 25 30
 Ile Asn Gln Gln Leu Asn Pro Lys Thr Asn Lys Trp Glu Asp Lys Arg
 35 40 45
 Leu Leu Tyr Ser Gln Ala Lys Ala Glu Ser Asn Ser His His Ala Pro
 50 55 60

Leu	Ser	Asp	Gly	Lys	Thr	Gly	Ser	Ser	Tyr	Pro	His	Trp	Phe	Thr	Asn	
65					70					75					80	
Gly	Tyr	Asp	Gly	Asn	Gly	Lys	Leu	Ile	Lys	Gly	Arg	Thr	Pro	Ile	Lys	
				85					90					95		
Phe	Gly	Lys	Ala	Asp	Cys	Asp	Arg	Pro	Pro	Lys	His	Ser	Gln	Asn	Gly	
			100					105					110			
Met	Gly	Lys	Asp	Asp	His	Tyr	Leu	Leu	Glu	Phe	Pro	Thr	Phe	Pro	Asp	
		115					120					125				
Gly	His	Asp	Tyr	Lys	Phe	Asp	Ser	Lys	Lys	Pro	Lys	Glu	Asp	Pro	Gly	
	130					135					140					
Pro	Ala	Arg	Val	Ile	Tyr	Thr	Tyr	Pro	Asn	Lys	Val	Phe	Cys	Gly	Ile	
145					150					155					160	
Val	Ala	His	Gln	Arg	Gly	Asn	Gln	Gly	Asp	Leu	Arg	Leu	Cys	Ser	His	
			165						170					175		

<210> 31

<211> 310

<212> PRT

<213> *Aspergillus fumigatus* (*Sartorya fumigata*)

<400> 31

Met	Ala	Ala	Leu	Leu	Arg	Leu	Ala	Val	Leu	Leu	Pro	Leu	Ala	Ala	Pro	
1				5					10					15		
Leu	Val	Ala	Thr	Leu	Pro	Thr	Ser	Pro	Val	Pro	Ile	Ala	Ala	Arg	Ala	
			20					25					30			
Thr	Pro	His	Glu	Pro	Val	Phe	Phe	Ser	Trp	Asp	Ala	Gly	Ala	Val	Thr	
		35					40					45				
Ser	Phe	Pro	Ile	His	Ser	Ser	Cys	Asn	Ala	Thr	Gln	Arg	Arg	Gln	Ile	
	50					55					60					
Glu	Ala	Gly	Leu	Asn	Glu	Ala	Val	Glu	Leu	Ala	Arg	His	Ala	Lys	Ala	
65				70					75					80		
His	Ile	Leu	Arg	Trp	Gly	Asn	Glu	Ser	Glu	Ile	Tyr	Arg	Lys	Tyr	Phe	
			85						90					95		
Gly	Asn	Arg	Pro	Thr	Met	Glu	Ala	Val	Gly	Ala	Tyr	Asp	Val	Ile	Val	
			100					105					110			
Asn	Gly	Asp	Lys	Ala	Asn	Val	Leu	Phe	Arg	Cys	Asp	Asn	Pro	Asp	Gly	
		115					120					125				
Asn	Cys	Ala	Leu	Glu	Gly	Trp	Gly	Gly	His	Trp	Arg	Gly	Ala	Asn	Ala	
	130					135					140					
Thr	Ser	Glu	Thr	Val	Ile	Cys	Asp	Arg	Ser	Tyr	Thr	Thr	Arg	Arg	Trp	
145					150					155					160	
Leu	Val	Ser	Met	Cys	Ser	Gln	Gly	Tyr	Thr	Val	Ala	Gly	Ser	Glu	Thr	
			165						170					175		
Asn	Thr	Phe	Trp	Ala	Ser	Asp	Leu	Met	His	Arg	Leu	Tyr	His	Val	Pro	
		180						185					190			
Ala	Val	Gly	Gln	Gly	Trp	Val	Asp	His	Phe	Ala	Asp	Gly	Tyr	Asp	Glu	
		195					200					205				
Val	Ile	Ala	Leu	Ala	Lys	Ser	Asn	Gly	Thr	Glu	Ser	Thr	His	Asp	Ser	
	210					215					220					
Glu	Ala	Phe	Glu	Tyr	Phe	Ala	Leu	Glu	Ala	Tyr	Ala	Phe	Asp	Ile	Ala	
225					230					235				240		
Ala	Pro	Gly	Val	Gly	Cys	Ala	Gly	Glu	Ser	His	Gly	Pro	Asp	Gln	Gly	
				245					250					255		
His	Asp	Thr	Gly	Ser	Ala	Ser	Ala	Pro	Ala	Ser	Thr	Ser	Thr	Ser	Ser	
		260						265					270			
Ser	Ser	Ser	Gly	Ser	Gly	Ser	Gly	Ala	Thr	Thr	Thr	Pro	Thr	Asp	Ser	

275	280	285
Pro Ser Ala Thr Ile Asp Val	Pro Ser Asn Cys His Thr His Glu Gly	
290	295	300
Gly Gln Leu His Cys Thr		
305	310	

<210> 32
 <211> 168
 <212> PRT
 <213> Aspergillus fumigatus (Sartorya fumigata)

<400> 32	
Met Ser Gly Leu Lys Ala Gly Asp Ser Phe Pro Ser Asp Val Val Phe	
1 5 10 15	
Ser Tyr Ile Pro Trp Ser Glu Asp Lys Gly Glu Ile Thr Ala Cys Gly	
20 25 30	
Ile Pro Ile Asn Tyr Asn Ala Ser Lys Glu Trp Ala Asp Lys Lys Val	
35 40 45	
Ile Leu Phe Ala Leu Pro Gly Ala Phe Thr Pro Val Cys Ser Ala Arg	
50 55 60	
His Val Pro Glu Tyr Ile Glu Lys Leu Pro Glu Ile Arg Ala Lys Gly	
65 70 75 80	
Val Asp Val Val Ala Val Leu Ala Tyr Asn Asp Ala Tyr Val Met Ser	
85 90 95	
Ala Trp Gly Lys Ala Asn Gln Val Thr Gly Asp Asp Ile Leu Phe Leu	
100 105 110	
Ser Asp Pro Asp Ala Arg Phe Ser Lys Ser Ile Gly Trp Ala Asp Glu	
115 120 125	
Glu Gly Arg Thr Lys Arg Tyr Ala Leu Val Ile Asp His Gly Lys Ile	
130 135 140	
Thr Tyr Ala Ala Leu Glu Pro Ala Lys Asn His Leu Glu Phe Ser Ser	
145 150 155 160	
Ala Glu Thr Val Leu Lys His Leu	
165	

<210> 33
 <211> 152
 <212> PRT
 <213> Aspergillus fumigatus (Sartorya fumigata)

<400> 33	
Met Lys Phe Thr Thr Pro Ile Ser Leu Ile Ser Leu Phe Val Ser Ser	
1 5 10 15	
Ala Leu Ala Ala Pro Thr Pro Glu Asn Glu Ala Arg Asp Ala Ile Pro	
20 25 30	
Val Ser Val Ser Tyr Asp Pro Arg Tyr Asp Asn Ala Gly Thr Ser Met	
35 40 45	
Asn Asp Val Ser Cys Ser Asn Gly Val Asn Gly Leu Val Thr Lys Trp	
50 55 60	
Pro Thr Phe Gly Ser Val Pro Gly Phe Ala Arg Ile Gly Gly Ala Pro	
65 70 75 80	
Thr Ile Pro Gly Trp Asn Ser Pro Asn Cys Gly Lys Cys Tyr Lys Leu	
85 90 95	
Gln Tyr Glu Gln Asn Thr Ile Tyr Val Thr Ala Ile Asp Ala Ala Pro	
100 105 110	

Gly Gly Phe Asn Ile Ala Thr Ser Ala Met Asp Gln Leu Thr Asn Gly
 115 120 125
 Met Ala Val Glu Leu Gly Arg Val Gln Ala Thr Tyr Glu Glu Ala Asp
 130 135 140
 Pro Ser His Cys Ala Ser Gly Val
 145 150

<210> 34
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 34
 Gly Val Phe Asn Tyr Glu Thr Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
 115 120 125
 Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 35
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 35
 Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Glu Gly Asp Thr Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp His Ala Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Met Ile Glu Gly Gly Ala Leu Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Cys Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp Gln Glu Met

	115						120					125							
Lys	Ala	Glu	His	Met	Lys	Ala	Ile	Lys	Glu	Lys	Gly	Glu	Ala	Leu	Leu				
	130						135					140							
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn					
145						150					155								

<210> 36
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 36																			
Gly	Val	Phe	Asn	Tyr	Glu	Ile	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala				
1				5					10					15					
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Val	Pro	Lys				
			20					25				30							
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly				
		35					40					45							
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Asn	Phe	Pro	Glu	Gly	Phe	Pro	Phe				
	50					55					60								
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys				
65				70					75					80					
Tyr	Asn	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu				
			85					90					95						
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Cys				
			100					105					110						
Val	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asn	His	Glu	Val				
		115					120					125							
Lys	Ala	Glu	Gln	Val	Lys	Ala	Ser	Lys	Gln	Met	Gly	Glu	Thr	Leu	Leu				
	130					135					140								
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn					
145					150					155									

<210> 37
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 37																			
Gly	Val	Phe	Asn	Tyr	Glu	Thr	Glu	Ala	Thr	Ser	Val	Ile	Pro	Ala	Ala				
1				5					10					15					
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Phe	Pro	Lys				
			20					25				30							
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly				
		35					40					45							
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Ser	Phe	Pro	Glu	Gly	Ile	Pro	Phe				
	50					55					60								
Lys	Tyr	Val	Lys	Gly	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys				
65				70					75					80					
Tyr	Ser	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu				
			85					90					95						
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asn	Gly	Gly	Ser				
			100					105					110						
Ile	Leu	Lys	Ile	Asn	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Val				
		115					120					125							

Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 38

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 38

Gly Val Phe Asn Tyr Glu Ile Glu Ala Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asn Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Asn Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
 115 120 125
 Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 39

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 39

Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Glu Gly Asp Asn Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Asn Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Cys
 100 105 110
 Val Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asn His Glu Val
 115 120 125
 Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu

130 135 140
Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
145 150 155

<210> 40

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 40

Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala Ala
1 5 10 15
Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
20 25 30
Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
35 40 45
Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro Phe
50 55 60
Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
65 70 75 80
Tyr Ser Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
85 90 95
Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asn Gly Gly Ser
100 105 110
Ile Leu Lys Ile Asn Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
115 120 125
Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
130 135 140
Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
145 150 155

<210> 41

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 41

Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
1 5 10 15
Arg Leu Phe Lys Ala Phe Ile Leu Glu Gly Asp Thr Leu Ile Pro Lys
20 25 30
Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
35 40 45
Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
50 55 60
Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp His Ala Asn Phe Lys
65 70 75 80
Tyr Ser Tyr Ser Met Ile Glu Gly Gly Ala Leu Gly Asp Thr Leu Glu
85 90 95
Lys Ile Cys Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
100 105 110
Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu Met
115 120 125
Lys Ala Glu His Met Lys Ala Ile Lys Glu Lys Gly Glu Ala Leu Leu
130 135 140

Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 42

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 42

Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Met Phe Lys Ala Phe Ile Leu Asp Gly Asp Lys Leu Val Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Asn Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Cys
 100 105 110
 Val Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asn His Glu Val
 115 120 125
 Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 43

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 43

Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp His Ala Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Met Ile Glu Gly Gly Ala Leu Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Cys Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu Met
 115 120 125
 Lys Ala Glu His Met Lys Ala Ile Lys Glu Lys Gly Glu Ala Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn

145

150

155

<210> 44

<211> 133

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 44

Met	Ser	Trp	Gln	Thr	Tyr	Val	Asp	Glu	His	Leu	Met	Cys	Asp	Ile	Asp
1				5					10					15	
Gly	Gln	Ala	Ser	Asn	Ser	Leu	Ala	Ser	Ala	Ile	Val	Gly	His	Asp	Gly
		20						25					30		
Ser	Val	Trp	Ala	Gln	Ser	Ser	Ser	Phe	Pro	Gln	Phe	Lys	Pro	Gln	Glu
		35					40					45			
Ile	Thr	Gly	Ile	Met	Lys	Asp	Phe	Glu	Glu	Pro	Gly	His	Leu	Ala	Pro
	50					55					60				
Thr	Gly	Leu	His	Leu	Gly	Gly	Ile	Lys	Tyr	Met	Val	Ile	Gln	Gly	Glu
65					70				75						80
Ala	Gly	Ala	Val	Ile	Arg	Gly	Lys	Lys	Gly	Ser	Gly	Gly	Ile	Thr	Ile
				85					90					95	
Lys	Lys	Thr	Gly	Gln	Ala	Leu	Val	Phe	Gly	Ile	Tyr	Glu	Glu	Pro	Val
			100					105					110		
Thr	Pro	Gly	Gln	Cys	Asn	Met	Val	Val	Glu	Arg	Leu	Gly	Asp	Tyr	Leu
		115					120					125			
Ile	Asp	Gln	Gly	Leu											
		130													

<210> 45

<211> 205

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 45

Met	Pro	Cys	Ser	Thr	Glu	Ala	Met	Glu	Lys	Ala	Gly	His	Gly	His	Ala
1				5					10					15	
Ser	Thr	Pro	Arg	Lys	Arg	Ser	Leu	Ser	Asn	Ser	Ser	Phe	Arg	Leu	Arg
			20					25					30		
Ser	Glu	Ser	Leu	Asn	Thr	Leu	Arg	Leu	Arg	Arg	Ile	Phe	Asp	Leu	Phe
		35					40					45			
Asp	Lys	Asn	Ser	Asp	Gly	Ile	Ile	Thr	Val	Asp	Glu	Leu	Ser	Arg	Ala
	50					55					60				
Leu	Asn	Leu	Leu	Gly	Leu	Glu	Thr	Asp	Leu	Ser	Glu	Leu	Glu	Ser	Thr
65					70				75						80
Val	Lys	Ser	Phe	Thr	Arg	Glu	Gly	Asn	Ile	Gly	Leu	Gln	Phe	Glu	Asp
			85					90						95	
Phe	Ile	Ser	Leu	His	Gln	Ser	Leu	Asn	Asp	Ser	Tyr	Phe	Ala	Tyr	Gly
			100					105					110		
Gly	Glu	Asp	Glu	Asp	Asp	Asn	Glu	Glu	Asp	Met	Arg	Lys	Ser	Ile	Leu
		115					120					125			
Ser	Gln	Glu	Glu	Ala	Asp	Ser	Phe	Gly	Gly	Phe	Lys	Val	Phe	Asp	Glu
		130				135					140				
Asp	Gly	Asp	Gly	Tyr	Ile	Ser	Ala	Arg	Glu	Leu	Gln	Met	Val	Leu	Gly
145					150					155					160
Lys	Leu	Gly	Phe	Ser	Glu	Gly	Ser	Glu	Ile	Asp	Arg	Val	Glu	Lys	Met
				165					170					175	

Ile Val Ser Val Asp Ser Asn Arg Asp Gly Arg Val Asp Phe Phe Glu
 180 185 190
 Phe Lys Asp Met Met Arg Ser Val Leu Val Arg Ser Ser
 195 200 205

<210> 46
 <211> 352
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 46
 Met Ile Gly Leu Lys Leu Val Thr Val Leu Phe Ala Val Ala Thr Ile
 1 5 10 15
 Thr His Ala Ala Glu Leu Gln Arg Val Pro Leu Tyr Lys Leu Val His
 20 25 30
 Val Phe Ile Asn Thr Gln Tyr Ala Gly Ile Thr Lys Ile Gly Asn Gln
 35 40 45
 Asn Phe Leu Thr Val Phe Asp Ser Thr Ser Cys Asn Val Val Val Ala
 50 55 60
 Ser Gln Glu Cys Val Gly Gly Ala Cys Val Cys Pro Asn Leu Gln Lys
 65 70 75 80
 Tyr Glu Lys Leu Lys Pro Lys Tyr Ile Ser Asp Gly Asn Val Gln Val
 85 90 95
 Lys Phe Phe Asp Thr Gly Ser Ala Val Gly Arg Gly Ile Glu Asp Ser
 100 105 110
 Leu Thr Ile Ser Asn Leu Thr Thr Ser Gln Gln Asp Ile Val Leu Ala
 115 120 125
 Asp Glu Leu Ser Gln Glu Val Cys Ile Leu Ser Ala Asp Val Val Val
 130 135 140
 Gly Ile Ala Ala Pro Gly Cys Pro Asn Ala Leu Lys Gly Lys Thr Val
 145 150 155 160
 Leu Glu Asn Phe Val Glu Glu Asn Leu Ile Ala Pro Val Phe Ser Ile
 165 170 175
 His His Ala Arg Phe Gln Asp Gly Glu His Phe Gly Glu Ile Ile Phe
 180 185 190
 Gly Gly Ser Asp Trp Lys Tyr Val Asp Gly Glu Phe Thr Tyr Val Pro
 195 200 205
 Leu Val Gly Asp Asp Ser Trp Lys Phe Arg Leu Asp Gly Val Lys Ile
 210 215 220
 Gly Asp Thr Thr Val Ala Pro Ala Gly Thr Gln Ala Ile Ile Asp Thr
 225 230 235 240
 Ser Lys Ala Ile Ile Val Gly Pro Lys Ala Tyr Val Asn Pro Ile Asn
 245 250 255
 Glu Ala Ile Gly Cys Val Val Glu Lys Thr Thr Thr Arg Arg Ile Cys
 260 265 270
 Lys Leu Asp Cys Ser Lys Ile Pro Ser Leu Pro Asp Val Thr Phe Val
 275 280 285
 Ile Asn Gly Arg Asn Phe Asn Ile Ser Ser Gln Tyr Tyr Ile Gln Gln
 290 295 300
 Asn Gly Asn Leu Cys Tyr Ser Gly Phe Gln Pro Cys Gly His Ser Asp
 305 310 315 320
 His Phe Phe Ile Gly Asp Phe Phe Val Asp His Tyr Tyr Ser Glu Phe
 325 330 335
 Asn Trp Glu Asn Lys Thr Met Gly Phe Gly Arg Ser Val Glu Ser Val
 340 345 350

<210> 47
 <211> 182
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 47
 Ala Val Leu Ala Leu Cys Ala Thr Asp Thr Leu Ala Asn Glu Asp Cys
 1 5 10 15
 Phe Arg His Glu Ser Leu Val Pro Asn Leu Asp Tyr Glu Arg Phe Arg
 20 25 30
 Gly Ser Trp Ile Ile Ala Ala Gly Thr Ser Glu Ala Leu Thr Gln Tyr
 35 40 45
 Lys Cys Trp Ile Asp Arg Phe Ser Tyr Asp Asp Ala Leu Val Ser Lys
 50 55 60
 Tyr Thr Asp Ser Gln Gly Lys Asn Arg Thr Thr Ile Arg Gly Arg Thr
 65 70 75 80
 Lys Phe Glu Gly Asn Lys Phe Thr Ile Asp Tyr Asn Asp Lys Gly Lys
 85 90 95
 Ala Phe Ser Ala Pro Tyr Ser Val Leu Ala Thr Asp Tyr Glu Asn Tyr
 100 105 110
 Ala Ile Val Glu Gly Cys Pro Ala Ala Ala Asn Gly His Val Ile Tyr
 115 120 125
 Val Gln Ile Arg Phe Ser Val Arg Arg Phe His Pro Lys Leu Gly Asp
 130 135 140
 Lys Glu Met Ile Gln His Tyr Thr Leu Asp Gln Val Asn Gln His Lys
 145 150 155 160
 Lys Ala Ile Glu Glu Asp Leu Lys His Phe Asn Leu Lys Tyr Glu Asp
 165 170 175
 Leu His Ser Thr Cys His
 180

<210> 48
 <211> 203
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 48
 Ala Pro Ser Tyr Lys Leu Thr Tyr Cys Pro Val Lys Ala Leu Gly Glu
 1 5 10 15
 Pro Ile Arg Phe Leu Leu Ser Tyr Gly Glu Lys Asp Phe Glu Asp Tyr
 20 25 30
 Arg Phe Gln Glu Gly Asp Trp Pro Asn Leu Lys Pro Ser Met Pro Phe
 35 40 45
 Gly Lys Thr Pro Val Leu Glu Ile Asp Gly Lys Gln Thr His Gln Ser
 50 55 60
 Val Ala Ile Ser Arg Tyr Leu Gly Lys Gln Phe Gly Leu Ser Gly Lys
 65 70 75 80
 Asp Asp Trp Glu Asn Leu Glu Ile Asp Met Ile Val Asp Thr Ile Ser
 85 90 95
 Asp Phe Arg Ala Ala Ile Ala Asn Tyr His Tyr Asp Ala Asp Glu Asn
 100 105 110
 Ser Lys Gln Lys Lys Trp Asp Pro Leu Lys Lys Glu Thr Ile Pro Tyr
 115 120 125
 Tyr Thr Lys Lys Phe Asp Glu Val Val Lys Ala Asn Gly Gly Tyr Leu
 130 135 140

Ala Ala Gly Lys Leu Thr Trp Ala Asp Phe Tyr Phe Val Ala Ile Leu
 145 150 155 160
 Asp Tyr Leu Asn His Met Ala Lys Glu Asp Leu Val Ala Asn Gln Pro
 165 170 175
 Asn Leu Lys Ala Leu Arg Glu Lys Val Leu Gly Leu Pro Ala Ile Lys
 180 185 190
 Ala Trp Val Ala Lys Arg Pro Pro Thr Asp Leu
 195 200

<210> 49
 <211> 144
 <212> PRT
 <213> Blomia tropicalis (Mite)

<400> 49
 Met Lys Ser Val Leu Ile Phe Leu Val Ala Ile Ala Leu Phe Ser Ala
 1 5 10 15
 Asn Ile Val Ser Ala Asp Glu Gln Thr Thr Arg Gly Arg His Thr Glu
 20 25 30
 Pro Asp Asp His His Glu Lys Pro Thr Thr Gln Cys Thr His Glu Glu
 35 40 45
 Thr Thr Ser Thr Gln His His His Glu Glu Val Val Thr Thr Gln Thr
 50 55 60
 Pro His His Glu Glu Lys Thr Thr Thr Glu Glu Thr His His Ser Asp
 65 70 75 80
 Asp Leu Ile Val His Glu Gly Gly Lys Thr Tyr His Val Val Cys His
 85 90 95
 Glu Glu Gly Pro Ile His Ile Gln Glu Met Cys Asn Lys Tyr Ile Ile
 100 105 110
 Cys Ser Lys Ser Gly Ser Leu Trp Tyr Ile Thr Val Met Pro Cys Ser
 115 120 125
 Ile Gly Thr Lys Phe Asp Pro Ile Ser Arg Asn Cys Val Leu Asp Asn
 130 135 140

<210> 50
 <211> 172
 <212> PRT
 <213> Bos taurus (Bovine)

<400> 50
 Met Lys Ala Val Phe Leu Thr Leu Leu Phe Gly Leu Val Cys Thr Ala
 1 5 10 15
 Gln Glu Thr Pro Ala Glu Ile Asp Pro Ser Lys Ile Pro Gly Glu Trp
 20 25 30
 Arg Ile Ile Tyr Ala Ala Ala Asp Asn Lys Asp Lys Ile Val Glu Gly
 35 40 45
 Gly Pro Leu Arg Asn Tyr Tyr Arg Arg Ile Glu Cys Ile Asn Asp Cys
 50 55 60
 Glu Ser Leu Ser Ile Thr Phe Tyr Leu Lys Asp Gln Gly Thr Cys Leu
 65 70 75 80
 Leu Leu Thr Glu Val Ala Lys Arg Gln Glu Gly Tyr Val Tyr Val Leu
 85 90 95
 Glu Phe Tyr Gly Thr Asn Thr Leu Glu Val Ile His Val Ser Glu Asn
 100 105 110
 Met Leu Val Thr Tyr Val Glu Asn Tyr Asp Gly Glu Arg Ile Thr Lys

Met Thr Glu Gly Leu Ala Lys Gly Thr Ser Phe Thr Pro Glu Glu Leu
 130 135 140
 Glu Lys Tyr Gln Gln Leu Asn Ser Glu Arg Gly Val Pro Asn Glu Asn
 145 150 155 160
 Ile Glu Asn Leu Ile Lys Thr Asp Asn Cys Pro Pro
 165 170

<210> 51
 <211> 178
 <212> PRT
 <213> Bos taurus (Bovine)

<400> 51
 Met Lys Cys Leu Leu Leu Ala Leu Ala Leu Thr Cys Gly Ala Gln Ala
 1 5 10 15
 Leu Ile Val Thr Gln Thr Met Lys Gly Leu Asp Ile Gln Lys Val Ala
 20 25 30
 Gly Thr Trp Tyr Ser Leu Ala Met Ala Ala Ser Asp Ile Ser Leu Leu
 35 40 45
 Asp Ala Gln Ser Ala Pro Leu Arg Val Tyr Val Glu Glu Leu Lys Pro
 50 55 60
 Thr Pro Glu Gly Asp Leu Glu Ile Leu Leu Gln Lys Trp Glu Asn Gly
 65 70 75 80
 Glu Cys Ala Gln Lys Lys Ile Ile Ala Glu Lys Thr Lys Ile Pro Ala
 85 90 95
 Val Phe Lys Ile Asp Ala Leu Asn Glu Asn Lys Val Leu Val Leu Asp
 100 105 110
 Thr Asp Tyr Lys Lys Tyr Leu Leu Phe Cys Met Glu Asn Ser Ala Glu
 115 120 125
 Pro Glu Gln Ser Leu Ala Cys Gln Cys Leu Val Arg Thr Pro Glu Val
 130 135 140
 Asp Asp Glu Ala Leu Glu Lys Phe Asp Lys Ala Leu Lys Ala Leu Pro
 145 150 155 160
 Met His Ile Arg Leu Ser Phe Asn Pro Thr Gln Leu Glu Glu Gln Cys
 165 170 175
 His Ile

<210> 52
 <211> 129
 <212> PRT
 <213> Brassica juncea (Leaf mustard) (Indian mustard)

<400> 52
 Ala Gly Pro Phe Arg Phe Pro Arg Cys Arg Lys Glu Phe Gln Gln Ala
 1 5 10 15
 Gln His Leu Arg Ala Cys Gln Gln Trp Leu His Lys Gln Ala Met Gln
 20 25 30
 Ser Gly Ser Gly Pro Gln Pro Gln Gly Pro Gln Gln Arg Pro Pro Leu
 35 40 45
 Leu Gln Gln Cys Cys Asn Glu Leu His Gln Glu Glu Pro Leu Cys Val
 50 55 60
 Cys Pro Thr Leu Lys Gly Ala Ser Lys Ala Val Lys Gln Gln Ile Arg
 65 70 75 80

Gln Gln Gly Gln Gln Gln Gly Gln Gln Gly Gln Gln Leu Gln His Glu
85 90 95
Ile Ser Arg Ile Tyr Gln Thr Ala Thr His Leu Pro Arg Val Cys Asn
100 105 110
Ile Pro Arg Val Ser Ile Cys Pro Phe Gln Lys Thr Met Pro Gly Pro
115 120 125
Ser

<210> 53
<211> 350
<212> PRT
<213> Candida albicans (Yeast)

<400> 53
Met Ser Glu Gln Ile Pro Lys Thr Gln Lys Ala Val Val Phe Asp Thr
1 5 10 15
Asn Gly Gly Gln Leu Val Tyr Lys Asp Tyr Pro Val Pro Thr Pro Lys
20 25 30
Pro Asn Glu Leu Leu Ile His Val Lys Tyr Ser Gly Val Cys His Thr
35 40 45
Asp Leu His Ala Arg Lys Gly Asp Trp Pro Leu Ala Thr Lys Leu Pro
50 55 60
Leu Val Gly Gly His Glu Gly Ala Gly Val Val Val Gly Met Gly Glu
65 70 75 80
Asn Val Lys Gly Trp Lys Ile Gly Asp Phe Ala Gly Ile Lys Trp Leu
85 90 95
Asn Gly Ser Cys Met Ser Cys Glu Phe Cys Gln Gln Gly Ala Glu Pro
100 105 110
Asn Cys Gly Glu Ala Asp Leu Ser Gly Tyr Thr His Asp Gly Ser Phe
115 120 125
Glu Gln Tyr Ala Thr Ala Asp Ala Val Gln Ala Ala Lys Ile Pro Ala
130 135 140
Gly Thr Asp Leu Ala Asn Val Ala Pro Ile Leu Cys Ala Gly Val Thr
145 150 155 160
Val Tyr Lys Ala Leu Lys Thr Ala Asp Leu Ala Ala Gly Gln Trp Val
165 170 175
Ala Ile Ser Gly Ala Gly Gly Gly Leu Gly Ser Leu Ala Val Gln Tyr
180 185 190
Ala Arg Ala Met Gly Leu Arg Val Val Ala Ile Asp Gly Gly Asp Glu
195 200 205
Lys Gly Glu Phe Val Lys Ser Leu Gly Ala Glu Ala Tyr Val Asp Phe
210 215 220
Thr Lys Asp Lys Asp Ile Val Glu Ala Val Lys Lys Ala Thr Asp Gly
225 230 235 240
Gly Pro His Gly Ala Ile Asn Val Ser Val Ser Glu Lys Ala Ile Asp
245 250 255
Gln Ser Val Glu Tyr Val Arg Pro Leu Gly Lys Val Val Leu Val Gly
260 265 270
Leu Pro Ala His Ala Lys Val Thr Ala Pro Val Phe Asp Ala Val Val
275 280 285
Lys Ser Ile Glu Ile Lys Gly Ser Tyr Val Gly Asn Arg Lys Asp Thr
290 295 300
Ala Glu Ala Ile Asp Phe Phe Ser Arg Gly Leu Ile Lys Cys Pro Ile
305 310 315 320
Lys Ile Val Gly Leu Ser Asp Leu Pro Glu Val Phe Lys Leu Met Glu

Asp Asp Thr Ser Leu Val Ala His Leu Met Val Arg Asp Leu Ser Arg
 130 135 140
 Gln Gln Asp Phe Leu Pro Ala Phe Glu Ser Val Cys Glu Asp Ile Gly
 145 150 155 160
 Leu His Lys Asp Gln Ile Val Val Leu Ser Asp Asp Asp Arg Cys Gln
 165 170 175
 Gly Ser Arg Asp
 180

<210> 56
 <211> 159
 <212> PRT
 <213> Carpinus betulus (Hornbeam)

<400> 56
 Gly Val Phe Asn Tyr Glu Ala Glu Thr Pro Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ser Tyr Val Leu Asp Gly Asp Lys Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Val Ile Ser Ser Val Glu Asn Val Gly Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Asn Ile Thr Phe Ala Glu Gly Ile Pro Phe
 50 55 60
 Lys Phe Val Lys Glu Arg Val Asp Glu Val Asp Asn Ala Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Thr Val Ile Glu Gly Asp Val Leu Gly Asp Lys Leu Glu
 85 90 95
 Lys Val Ser His Glu Leu Lys Ile Val Ala Ala Pro Gly Gly Gly Ser
 100 105 110
 Ile Val Lys Ile Ser Ser Lys Phe His Ala Lys Gly Tyr His Glu Val
 115 120 125
 Asn Ala Glu Lys Met Lys Gly Ala Lys Glu Met Ala Glu Lys Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Thr Ala Glu Tyr Asn
 145 150 155

<210> 57
 <211> 159
 <212> PRT
 <213> Carpinus betulus (Hornbeam)

<400> 57
 Gly Val Phe Asn Tyr Glu Ala Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asn Lys Leu Ile Pro Lys
 20 25 30
 Val Ser Pro Gln Ala Val Ser Ser Val Glu Asn Val Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Ser Glu Gly Ser Pro Val
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Glu Glu Ile Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Thr Val Ile Glu Gly Asp Val Leu Gly Asp Lys Leu Glu
 85 90 95
 Lys Val Ser His Glu Leu Lys Ile Val Ala Ala Pro Gly Gly Gly Ser

Glu Gly Thr Asn Ile Tyr Asn Asn Asn Glu Ala Phe Lys Val Glu Asn
 340 345 350
 Gly Ser Ala Ala Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys
 355 360 365
 Ile Leu Ser Lys Pro Cys Ser
 370 375

<210> 59
 <211> 496
 <212> PRT
 <213> Cladosporium herbarum

<400> 59
 Met Thr Ser Val Gln Leu Glu Thr Pro His Ser Gly Lys Tyr Glu Gln
 1 5 10 15
 Pro Thr Gly Leu Phe Ile Asn Asn Glu Phe Val Lys Gly Gln Glu Gly
 20 25 30
 Lys Thr Phe Asp Val Ile Asn Pro Ser Asp Glu Ser Val Ile Thr Gln
 35 40 45
 Val His Glu Ala Thr Glu Lys Asp Val Asp Ile Ala Val Ala Ala Ala
 50 55 60
 Arg Gln Ala Phe Glu Gly Ser Trp Arg Leu Glu Thr Pro Glu Asn Arg
 65 70 75 80
 Gly Lys Leu Leu Asn Asn Leu Ala Asn Leu Phe Glu Lys Asn Thr Asp
 85 90 95
 Leu Leu Ala Ala Val Glu Ser Leu Asp Asn Gly Lys Ala Thr Ser Met
 100 105 110
 Ala Arg Val Thr Ser Ala Cys Ala Ser Gly Cys Leu Arg Tyr Tyr Gly
 115 120 125
 Gly Trp Ala Asp Lys Ile Thr Gly Lys Val Ile Asp Thr Thr Pro Asp
 130 135 140
 Thr Phe Asn Tyr Val Lys Lys Glu Pro Ile Gly Val Cys Arg Ser Asp
 145 150 155 160
 His Ser Leu Glu Leu Pro Leu Leu Met Trp Ala Trp Lys Ile Gly Pro
 165 170 175
 Ala Ile Ala Cys Gly Asn Thr Val Val Leu Lys Thr Ala Glu Gln Thr
 180 185 190
 Pro Leu Gly Gly Leu Val Ala Ala Ser Leu Val Lys Glu Ala Gly Phe
 195 200 205
 Pro Pro Gly Val Ile Asn Val Ile Ser Gly Phe Gly Lys Val Ala Gly
 210 215 220
 Ala Ala Leu Ser Ser His Met Asp Val Asp Lys Val Ala Phe Thr Gly
 225 230 235 240
 Ser Thr Val Val Gly Arg Thr Ile Leu Lys Ala Ala Ala Ser Ser Asn
 245 250 255
 Leu Lys Lys Val Thr Leu Glu Leu Gly Lys Ser Pro Asn Ile Val
 260 265 270
 Phe Glu Asp Ala Asp Ile Asp Asn Ala Ile Ser Trp Val Asn Phe Gly
 275 280 285
 Ile Phe Phe Asn His Gly Gln Cys Cys Cys Ala Gly Ser Arg Val Tyr
 290 295 300
 Val Gln Glu Ser Ile Tyr Asp Lys Phe Val Gln Lys Phe Lys Glu Arg
 305 310 315 320
 Ala Gln Lys Asn Val Val Gly Asp Pro Phe Ala Ala Asp Thr Phe Gln
 325 330 335
 Gly Pro Gln Val Ser Lys Val Gln Phe Asp Arg Ile Met Glu Tyr Ile

340 345 350
 Gln Ala Gly Lys Asp Ala Gly Ala Thr Val Glu Thr Gly Gly Ser Arg
 355 360 365
 Lys Gly Asp Lys Gly Tyr Phe Ile Glu Pro Thr Ile Phe Ser Asn Val
 370 375 380
 Thr Glu Asp Met Lys Ile Val Lys Glu Glu Ile Phe Gly Pro Val Cys
 385 390 395 400
 Ser Ile Ala Lys Phe Lys Thr Lys Glu Asp Ala Ile Lys Leu Gly Asn
 405 410 415
 Ala Ser Thr Tyr Gly Leu Ala Ala Val His Thr Lys Asn Leu Asn
 420 425 430
 Thr Ala Ile Glu Val Ser Asn Ala Leu Lys Ala Gly Thr Val Trp Val
 435 440 445
 Asn Thr Tyr Asn Thr Leu His His Gln Met Pro Phe Gly Gly Tyr Lys
 450 455 460
 Glu Ser Gly Ile Gly Arg Glu Leu Gly Glu Asp Ala Leu Ala Asn Tyr
 465 470 475 480
 Thr Gln Thr Lys Thr Val Ser Ile Arg Leu Gly Asp Ala Leu Phe Gly
 485 490 495

<210> 60
 <211> 111
 <212> PRT
 <213> Cladosporium herbarum

<400> 60
 Met Lys Tyr Met Ala Ala Tyr Leu Leu Leu Gly Leu Ala Gly Asn Ser
 1 5 10 15
 Ser Pro Ser Ala Glu Asp Ile Lys Thr Val Leu Ser Ser Val Gly Ile
 20 25 30
 Asp Ala Asp Glu Glu Arg Leu Ser Ser Leu Leu Lys Glu Leu Glu Gly
 35 40 45
 Lys Asp Ile Asn Glu Leu Ile Ser Ser Gly Ser Gln Lys Leu Ala Ser
 50 55 60
 Val Pro Ser Gly Gly Ser Gly Ala Ala Pro Ser Ala Gly Gly Ala Ala
 65 70 75 80
 Ala Ala Gly Gly Ala Thr Glu Ala Ala Pro Glu Ala Ala Lys Glu Glu
 85 90 95
 Glu Lys Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu Phe Asp
 100 105 110

<210> 61
 <211> 643
 <212> PRT
 <213> Cladosporium herbarum

<400> 61
 Met Ala Pro Ala Ile Gly Ile Asp Leu Gly Thr Thr Tyr Ser Cys Val
 1 5 10 15
 Gly Ile Tyr Arg Asp Asp Arg Ile Glu Ile Ile Ala Asn Asp Gln Gly
 20 25 30
 Asn Arg Thr Thr Pro Ser Phe Val Ala Phe Thr Asp Thr Glu Arg Leu
 35 40 45
 Ile Gly Asp Ser Ala Lys Asn Gln Val Ala Ile Asn Pro His Asn Thr
 50 55 60

Val	Phe	Asp	Ala	Lys	Arg	Leu	Ile	Gly	Arg	Lys	Phe	Gln	Asp	Ala	Glu
65					70					75					80
Val	Gln	Ala	Asp	Met	Lys	His	Phe	Pro	Phe	Lys	Val	Ile	Glu	Lys	Ala
				85					90					95	
Gly	Lys	Pro	Val	Thr	Gln	Val	Glu	Phe	Lys	Gly	Glu	Thr	Lys	Asp	Phe
			100					105					110		
Thr	Pro	Glu	Glu	Ile	Ser	Ser	Met	Ile	Leu	Thr	Lys	Met	Arg	Glu	Thr
		115					120					125			
Ala	Glu	Ser	Tyr	Leu	Gly	Gly	Thr	Val	Asn	Asn	Ala	Val	Ile	Thr	Val
	130				135						140				
Pro	Ala	Tyr	Phe	Asn	Asp	Ser	Gln	Arg	Gln	Ala	Thr	Lys	Asp	Ala	Gly
145				150						155					160
Leu	Ile	Ala	Gly	Leu	Asn	Val	Leu	Arg	Ile	Ile	Asn	Glu	Pro	Thr	Ala
				165					170					175	
Ala	Ala	Ile	Ala	Tyr	Gly	Leu	Asp	Lys	Lys	Gln	Glu	Gly	Glu	Lys	Asn
			180					185					190		
Val	Leu	Ile	Phe	Asp	Leu	Gly	Gly	Gly	Thr	Phe	Asp	Val	Ser	Phe	Leu
		195					200					205			
Thr	Ile	Glu	Glu	Gly	Ile	Phe	Glu	Val	Lys	Ser	Thr	Ala	Gly	Asp	Thr
		210				215						220			
His	Leu	Gly	Gly	Glu	Asp	Phe	Asp	Asn	Arg	Leu	Val	Asn	His	Phe	Ser
225					230					235					240
Asn	Glu	Phe	Lys	Arg	Lys	His	Lys	Lys	Asp	Leu	Ser	Asp	Asn	Ala	Arg
				245					250					255	
Ala	Leu	Arg	Arg	Leu	Arg	Thr	Ala	Cys	Glu	Arg	Ala	Lys	Arg	Thr	Leu
			260					265					270		
Ser	Ser	Ser	Ala	Gln	Thr	Ser	Ile	Glu	Ile	Asp	Ser	Leu	Phe	Glu	Gly
		275					280					285			
Ile	Asp	Phe	Phe	Thr	Ser	Asn	Thr	Arg	Ala	Arg	Phe	Glu	Glu	Val	Gly
		290				295					300				
Gln	Asp	Leu	Phe	Arg	Gly	Asn	Met	Glu	Pro	Gly	Glu	Arg	Thr	Leu	Arg
305					310					315					320
Asp	Asp	Lys	Ile	Asp	Lys	Ser	Ser	Val	His	Glu	Ile	Val	Leu	Gly	Gly
				325					330					335	
Gly	Ser	Thr	Arg	Ile	Pro	Lys	Val	Gln	Lys	Leu	Val	Ser	Asp	Phe	Phe
			340					345					350		
Asn	Gly	Lys	Glu	Pro	Cys	Lys	Ser	Ile	Asn	Pro	Asp	Glu	Ala	Val	Ala
		355					360					365			
Tyr	Gly	Ala	Ala	Val	Gln	Ala	Ala	Ile	Leu	Ser	Gly	Asp	Thr	Ser	Ser
	370				375						380				
Lys	Ser	Thr	Lys	Glu	Ile	Leu	Leu	Asp	Val	Ala	Pro	Leu	Ser	Leu	
385					390				395					400	
Gly	Ile	Glu	Thr	Ala	Gly	Gly	Val	Met	Thr	Ala	Leu	Ile	Lys	Arg	Asn
				405					410					415	
Thr	Thr	Ile	Pro												

Thr Arg Tyr Gly Asn Phe Pro Ala Gln Trp Arg Thr Phe Trp Asp Arg
 85 90 95
 Thr Gly Gly Gln Trp Gln Thr Gly Ala Phe Trp Gly Lys Tyr Ala Gly
 100 105 110
 Leu Phe Ile Ser Thr Gly Thr Gln Gly Gly Gly Gln Glu Ser Thr Ala
 115 120 125
 Leu Ala Ala Met Ser Thr Leu Ser His His Gly Ile Ile Tyr Val Pro
 130 135 140
 Leu Gly Tyr Lys Thr Thr Phe His Leu Leu Gly Asp Asn Ser Glu Val
 145 150 155 160
 Arg Gly Ala Ala Val Trp Gly Ala Gly Thr Phe Ser Gly Gly Asp Gly
 165 170 175
 Ser Arg Gln Pro Ser Gln Lys Glu Leu Glu Leu Thr Ala Gln Gly Lys
 180 185 190
 Ala Phe Tyr Glu Ala Val Ala Lys Val Asn Phe Gln
 195 200

<210> 64
 <211> 440
 <212> PRT
 <213> Cladosporium herbarum

<400> 64
 Met Pro Ile Ser Lys Ile His Ser Arg Tyr Val Tyr Asp Ser Arg Gly
 1 5 10 15
 Asn Pro Thr Val Glu Val Asp Ile Val Thr Glu Thr Gly Leu His Arg
 20 25 30
 Ala Ile Val Pro Ser Gly Ala Ser Thr Gly Ser His Glu Ala Cys Glu
 35 40 45
 Leu Arg Asp Gly Asp Lys Ser Lys Trp Ala Gly Lys Gly Val Thr Lys
 50 55 60
 Ala Val Ala Asn Val Asn Glu Ile Ile Ala Pro Ala Leu Ile Lys Glu
 65 70 75 80
 Asn Leu Asp Val Lys Asp Gln Ala Ala Val Asp Ala Phe Leu Asn Lys
 85 90 95
 Leu Asp Gly Thr Thr Asn Lys Thr Lys Ile Gly Ala Asn Ala Ile Leu
 100 105 110
 Gly Val Ser Met Ala Val Ala Lys Ala Ala Ala Glu Lys Arg Val
 115 120 125
 Pro Leu Tyr Ala His Ile Ser Asp Leu Ser Gly Thr Lys Lys Pro Phe
 130 135 140
 Val Leu Pro Val Pro Phe Met Asn Val Val Asn Gly Gly Ser His Ala
 145 150 155 160
 Gly Gly Arg Leu Ala Phe Gln Glu Phe Met Ile Val Pro Ser Gly Ala
 165 170 175
 Pro Ser Phe Thr Glu Ala Met Arg Gln Gly Ala Glu Val Tyr Gln Lys
 180 185 190
 Leu Lys Ser Leu Thr Lys Lys Arg Tyr Gly Gln Ser Ala Gly Asn Val
 195 200 205
 Gly Asp Glu Gly Gly Val Ala Pro Asp Ile Gln Thr Ala Glu Glu Ala
 210 215 220
 Leu Asp Leu Ile Thr Asp Ala Ile Glu Glu Ala Gly Tyr Thr Gly Gln
 225 230 235 240
 Ile Lys Ile Ala Met Asp Val Ala Ser Ser Glu Phe Tyr Lys Ala Asp
 245 250 255
 Glu Lys Lys Tyr Asp Leu Asp Phe Lys Asn Pro Asp Ser Asp Lys Ser

260 265 270
 Lys Trp Ile Thr Tyr Glu Gln Leu Ala Asp Gln Tyr Lys Gln Leu Ala
 275 280 285
 Ala Lys Tyr Pro Ile Val Ser Ile Glu Asp Pro Phe Ala Glu Asp Asp
 290 295 300
 Trp Glu Ala Trp Ser Tyr Phe Tyr Lys Thr Ser Gly Ser Asp Phe Gln
 305 310 315 320
 Ile Val Gly Asp Asp Leu Thr Val Thr Asn Pro Glu Phe Ile Lys Lys
 325 330 335
 Ala Ile Glu Thr Lys Ala Cys Asn Ala Leu Leu Lys Val Asn Gln
 340 345 350
 Ile Gly Thr Ile Thr Glu Ala Ile Asn Ala Ala Lys Asp Ser Phe Ala
 355 360 365
 Ala Gly Trp Gly Val Met Val Ser His Arg Ser Gly Glu Thr Glu Asp
 370 375 380
 Val Thr Ile Ala Asp Ile Val Val Gly Leu Arg Ala Gly Gln Ile Lys
 385 390 395 400
 Thr Gly Ala Pro Ala Arg Ser Glu Arg Leu Ala Lys Leu Asn Gln Ile
 405 410 415
 Leu Arg Ile Glu Glu Glu Leu Gly Asp Lys Ala Val Tyr Ala Gly Asp
 420 425 430
 Asn Phe Arg Thr Ala Ile Asn Leu
 435 440

<210> 65
 <211> 110
 <212> PRT
 <213> Cladosporium herbarum

<400> 65
 Met Ser Ala Ala Glu Leu Ala Ser Ser Tyr Ala Ala Leu Ile Leu Ala
 1 5 10 15
 Asp Glu Gly Leu Glu Ile Thr Ala Asp Lys Leu Gln Ala Leu Ile Ser
 20 25 30
 Ala Ala Lys Val Pro Glu Ile Glu Pro Ile Trp Thr Ser Leu Phe Ala
 35 40 45
 Lys Ala Leu Glu Gly Lys Asp Val Lys Asp Leu Leu Leu Asn Val Gly
 50 55 60
 Ser Gly Gly Gly Ala Ala Pro Ala Ala Gly Gly Ala Ala Ala Gly Gly
 65 70 75 80
 Ala Ala Ala Val Leu Asp Ala Pro Ala Glu Glu Lys Ala Glu Glu Glu
 85 90 95
 Lys Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu Phe Asp
 100 105 110

<210> 66
 <211> 159
 <212> PRT
 <213> Corylus avellana (European hazel)

<400> 66
 Gly Val Phe Asn Tyr Glu Val Glu Thr Pro Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ser Tyr Val Leu Asp Gly Asp Lys Leu Ile Pro Lys
 20 25 30

Val	Ala	Pro	Gln	Ala	Ile	Thr	Ser	Val	Glu	Asn	Val	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Asn	Ile	Thr	Phe	Gly	Glu	Gly	Ser	Arg	Tyr
	50					55					60				
Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	Asn	Thr	Asn	Phe	Thr
65					70					75				80	
Tyr	Ser	Tyr	Thr	Val	Ile	Glu	Gly	Asp	Val	Leu	Gly	Asp	Lys	Leu	Glu
				85					90					95	
Lys	Val	Cys	His	Glu	Leu	Lys	Ile	Val	Ala	Ala	Pro	Gly	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Ser	Ser	Lys	Phe	His	Ala	Lys	Gly	Asp	His	Glu	Ile
		115					120					125			
Asn	Ala	Glu	Glu	Met	Lys	Gly	Ala	Lys	Glu	Met	Ala	Glu	Lys	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Thr	Tyr	Leu	Leu	Ala	His	Ser	Ala	Glu	Tyr	Asn	
145					150					155					

<210> 67
 <211> 346
 <212> PRT
 <213> Cupressus arizonica

Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp	Ser	Asn	Trp	Asp	Gln
1				5					10					15	
Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Val	Val	Gly	Phe	Gly	Ser	Ser	Thr
		20					25						30		
Met	Gly	Gly	Lys	Gly	Gly	Glu	Ile	Tyr	Thr	Val	Thr	Ser	Ser	Glu	Asp
		35					40					45			
Asn	Pro	Val	Asn	Pro	Thr	Pro	Gly	Thr	Leu	Arg	Tyr	Gly	Ala	Thr	Arg
	50					55					60				
Glu	Lys	Ala	Leu	Trp	Ile	Ile	Phe	Ser	Gln	Asn	Met	Asn	Ile	Lys	Leu
65					70					75				80	
Gln	Met	Pro	Leu	Tyr	Val	Ala	Gly	Tyr	Lys	Thr	Ile	Asp	Gly	Arg	Gly
				85					90					95	
Ala	Val	Val	His	Leu	Gly	Asn	Gly	Gly	Pro	Cys	Leu	Phe	Met	Arg	Lys
			100					105					110		
Ala	Ser	His	Val	Ile	Leu	His	Gly	Leu	His	Ile	His	Gly	Cys	Asn	Thr
		115					120					125			
Ser	Val	Leu	Gly	Asp	Val	Leu	Val	Ser	Glu	Ser	Ile	Gly	Val	Glu	Pro
	130					135					140				
Val	His	Ala	Gln	Asp	Gly	Asp	Ala	Ile	Thr	Met	Arg	Asn	Val	Thr	Asn
145				150						155				160	
Ala	Trp	Ile	Asp	His	Asn	Ser	Leu	Ser	Asp	Cys	Ser	Asp	Gly	Leu	Ile
			165						170					175	
Asp	Val	Thr	Leu	Gly	Ser	Thr	Gly	Ile	Thr	Ile	Ser	Asn	Asn	His	Phe
			180					185					190		
Phe	Asn	His	His	Lys	Val	Met	Leu	Gly	His	Asp	Asp	Thr	Tyr	Asp	
		195					200				205				
Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe	Asn	Gln	Phe	Gly	Pro
	210					215					220				
Asn	Ala	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr	Gly	Leu	Val	His	Val
225					230					235				240	
Ala	Asn	Asn	Asn	Tyr	Asp	Gln	Trp	Asn	Ile	Tyr	Ala	Ile	Gly	Gly	Ser
				245					250					255	
Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser	Phe	Thr	Ala	Pro	Asn

			260					265				270			
Glu	Ser	Tyr	Lys	Lys	Glu	Val	Thr	Lys	Arg	Ile	Gly	Cys	Glu	Thr	Thr
		275						280				285			
Ser	Ala	Cys	Ala	Asn	Trp	Val	Trp	Arg	Ser	Thr	Arg	Asp	Ala	Phe	Thr
		290					295				300				
Asn	Gly	Ala	Tyr	Phe	Val	Ser	Ser	Gly	Lys	Ala	Glu	Asp	Thr	Asn	Ile
305					310					315					320
Tyr	Asn	Ser	Asn	Glu	Ala	Phe	Lys	Val	Glu	Asn	Gly	Asn	Ala	Ala	Pro
			325						330					335	
Gln	Leu	Thr	Gln	Asn	Ala	Gly	Val	Val	Ala						
			340					345							

<210> 68

<211> 374

<212> PRT

<213> Cryptomeria japonica (Japanese cedar)

<400> 68

Met	Asp	Ser	Pro	Cys	Leu	Val	Ala	Leu	Leu	Val	Leu	Ser	Phe	Val	Ile
1				5					10					15	
Gly	Ser	Cys	Phe	Ser	Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp
			20					25					30		
Ser	Asn	Trp	Ala	Gln	Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Ala	Val	Gly
		35					40					45			
Phe	Gly	Ser	Ser	Thr	Met	Gly	Gly	Lys	Gly	Gly	Asp	Leu	Tyr	Thr	Val
	50					55					60				
Thr	Asn	Ser	Asp	Asp	Asp	Pro	Val	Asn	Pro	Ala	Pro	Gly	Thr	Leu	Arg
65					70					75					80
Tyr	Gly	Ala	Thr	Arg	Asp	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Ser	Gly	Asn
				85					90					95	
Met	Asn	Ile	Lys	Leu	Lys	Met	Pro	Met	Tyr	Ile	Ala	Gly	Tyr	Lys	Thr
			100					105					110		
Phe	Asp	Gly	Arg	Gly	Ala	Gln	Val	Tyr	Ile	Gly	Asn	Gly	Gly	Pro	Cys
		115					120					125			
Val	Phe	Ile	Lys	Arg	Val	Ser	Asn	Val	Ile	Ile	His	Gly	Leu	His	Leu
	130					135					140				
Tyr	Gly	Cys	Ser	Thr	Ser	Val	Leu	Gly	Asn	Val	Leu	Ile	Asn	Glu	Ser
145					150					155					160
Phe	Gly	Val	Glu	Pro	Val	His	Pro	Gln	Asp	Gly	Asp	Ala	Leu	Thr	Leu
				165					170					175	
Arg	Thr	Ala	Thr	Asn	Ile	Trp	Ile	Asp	His	Asn	Ser	Phe	Ser	Asn	Ser
			180					185					190		
Ser	Asp	Gly	Leu	Val	Asp	Val	Thr	Leu	Ser	Ser	Thr	Gly	Val	Thr	Ile
		195					200					205			
Ser	Asn	Asn	Leu	Phe	Phe	Asn	His	His	Lys	Val	Met	Leu	Leu	Gly	His
	210					215					220				
Asp	Asp	Ala	Tyr	Ser	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe	
225					230				235					240	
Asn	Gln	Phe	Gly	Pro	Asn	Cys	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr
				245					250					255	
Gly	Leu	Val	His	Val	Ala	Asn	Asn	Asn	Tyr	Asp	Pro	Trp	Thr	Ile	Tyr
			260					265					270		
Ala	Ile	Gly	Gly	Ser	Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser
		275					280					285			
Phe	Thr	Ala	Pro	Asn	Glu	Ser	Tyr	Lys	Lys	Gln	Val	Thr	Ile	Arg	Ile
		290				295					300				

<212> PRT

<213> *Dactylis glomerata* (Orchard grass) (Cocksfoot grass)

<400> 71

Glu Ala Pro Val Thr Phe Thr Val Glu Lys Gly Ser Asp Glu Lys Asn
1 5 10 15
Leu Ala Leu Ser Ile Lys Tyr Asn Lys Glu Gly Asp Ser Met Ala Glu
20 25 30
Val Glu Leu Lys
35

<210> 72

<211> 154

<212> PRT

<213> *Daucus carota* (Carrot)

<400> 72

Met Gly Ala Gln Ser His Ser Leu Glu Ile Thr Ser Ser Val Ser Ala
1 5 10 15
Glu Lys Ile Phe Ser Gly Ile Val Leu Asp Val Asp Thr Val Ile Pro
20 25 30
Lys Ala Ala Pro Gly Ala Tyr Lys Ser Val Glu Val Lys Gly Asp Gly
35 40 45
Gly Ala Gly Thr Val Arg Ile Ile Thr Leu Pro Glu Gly Ser Pro Ile
50 55 60
Thr Ser Met Thr Val Arg Thr Asp Ala Val Asn Lys Glu Ala Leu Thr
65 70 75 80
Tyr Asp Ser Thr Val Ile Asp Gly Asp Ile Leu Leu Gly Phe Ile Glu
85 90 95
Ser Ile Glu Thr His Leu Val Val Val Pro Thr Ala Asp Gly Gly Ser
100 105 110
Ile Thr Lys Thr Thr Ala Ile Phe His Thr Lys Gly Asp Ala Val Val
115 120 125
Pro Glu Glu Asn Ile Lys Phe Ala Asp Ala Gln Asn Thr Ala Leu Phe
130 135 140
Lys Ala Ile Glu Ala Tyr Leu Ile Ala Asn
145 150

<210> 73

<211> 321

<212> PRT

<213> *Dermatophagoides farinae* (House-dust mite)

<400> 73

Met Lys Phe Val Leu Ala Ile Ala Ser Leu Leu Val Leu Ser Thr Val
1 5 10 15
Tyr Ala Arg Pro Ala Ser Ile Lys Thr Phe Glu Glu Phe Lys Lys Ala
20 25 30
Phe Asn Lys Asn Tyr Ala Thr Val Glu Glu Glu Glu Val Ala Arg Lys
35 40 45
Asn Phe Leu Glu Ser Leu Lys Tyr Val Glu Ala Asn Lys Gly Ala Ile
50 55 60
Asn His Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Tyr Leu
65 70 75 80
Met Ser Ala Glu Ala Phe Glu Gln Leu Lys Thr Gln Phe Asp Leu Asn

			85					90					95					
Ala	Glu	Thr	Ser	Ala	Cys	Arg	Ile	Asn	Ser	Val	Asn	Val	Pro	Ser	Glu			
			100						105						110			
Leu	Asp	Leu	Arg	Ser	Leu	Arg	Thr	Val	Thr	Pro	Ile	Arg	Met	Gln	Gly			
			115						120						125			
Gly	Cys	Gly	Ser	Cys	Trp	Ala	Phe	Ser	Gly	Val	Ala	Ala	Thr	Glu	Ser			
			130						135						140			
Ala	Tyr	Leu	Ala	Tyr	Arg	Asn	Thr	Ser	Leu	Asp	Leu	Ser	Glu	Gln	Glu			
145				150						155						160		
Leu	Val	Asp	Cys	Ala	Ser	Gln	His	Gly	Cys	His	Gly	Asp	Thr	Ile	Pro			
			165						170						175			
Arg	Gly	Ile	Glu	Tyr	Ile	Gln	Gln	Asn	Gly	Val	Val	Glu	Glu	Arg	Ser			
			180						185						190			
Tyr	Pro	Tyr	Val	Ala	Arg	Glu	Gln	Arg	Cys	Arg	Arg	Pro	Asn	Ser	Gln			
			195						200						205			
His	Tyr	Gly	Ile	Ser	Asn	Tyr	Cys	Gln	Ile	Tyr	Pro	Pro	Asp	Val	Lys			
			210						215						220			
Gln	Ile	Arg	Glu	Ala	Leu	Thr	Gln	Thr	His	Thr	Ala	Ile	Ala	Val	Ile			
225				230						235						240		
Ile	Gly	Ile	Lys	Asp	Leu	Arg	Ala	Phe	Gln	His	Tyr	Asp	Gly	Arg	Thr			
			245						250						255			
Ile	Ile	Gln	His	Asp	Asn	Gly	Tyr	Gln	Pro	Asn	Tyr	His	Ala	Val	Asn			
			260						265						270			
Ile	Val	Gly	Tyr	Gly	Ser	Thr	Gln	Gly	Asp	Asp	Tyr	Trp	Ile	Val	Arg			
			275						280						285			
Asn	Ser	Trp	Asp	Thr	Thr	Trp	Gly	Asp	Ser	Gly	Tyr	Gly	Tyr	Phe	Gln			
			290						295						300			
Ala	Gly	Asn	Asn	Leu	Met	Met	Ile	Glu	Gln	Tyr	Pro	Tyr	Val	Val	Ile			
305				310						315						320		
Met																		

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<210> 74
<211> 146
<212> PRT
<213> Dermatophagoides farinae (House-dust mite)
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<400> 74

50

Arg Asp
145

<210> 75
<211> 259
<212> PRT
<213> Dermatophagoides farinae (House-dust mite)

<400> 75
Met Met Ile Leu Thr Ile Val Val Leu Leu Ala Ala Asn Ile Leu Ala
1 5 10 15
Thr Pro Ile Leu Pro Ser Ser Pro Asn Ala Thr Ile Val Gly Gly Val
20 25 30
Lys Ala Gln Ala Gly Asp Cys Pro Tyr Gln Ile Ser Leu Gln Ser Ser
35 40 45
Ser His Phe Cys Gly Gly Ser Ile Leu Asp Glu Tyr Trp Ile Leu Thr
50 55 60
Ala Ala His Cys Val Asn Gly Gln Ser Ala Lys Lys Leu Ser Ile Arg
65 70 75 80
Tyr Asn Thr Leu Lys His Ala Ser Gly Gly Glu Lys Ile Gln Val Ala
85 90 95
Glu Ile Tyr Gln His Glu Asn Tyr Asp Ser Met Thr Ile Asp Asn Asp
100 105 110
Val Ala Leu Ile Lys Leu Lys Thr Pro Met Thr Leu Asp Gln Thr Asn
115 120 125
Ala Lys Pro Val Pro Leu Pro Ala Gln Gly Ser Asp Val Lys Val Gly
130 135 140
Asp Lys Ile Arg Val Ser Gly Trp Gly Tyr Leu Gln Glu Gly Ser Tyr
145 150 155 160
Ser Leu Pro Ser Glu Leu Gln Arg Val Asp Ile Asp Val Val Ser Arg
165 170 175
Glu Gln Cys Asp Gln Leu Tyr Ser Lys Ala Gly Ala Asp Val Ser Glu
180 185 190
Asn Met Ile Cys Gly Gly Asp Val Ala Asn Gly Gly Val Asp Ser Cys
195 200 205
Gln Gly Asp Ser Gly Gly Pro Val Val Asp Val Ala Thr Lys Gln Ile
210 215 220
Val Gly Ile Val Ser Trp Gly Tyr Gly Cys Ala Arg Lys Gly Tyr Pro
225 230 235 240
Gly Val Tyr Thr Arg Val Gly Asn Phe Val Asp Trp Ile Glu Ser Lys
245 250 255
Arg Ser Gln

<210> 76
<211> 20
<212> PRT
<213> Dermatophagoides farinae (House-dust mite)

<400> 76
Ala Val Gly Gly Gln Asp Ala Asp Leu Ala Glu Ala Pro Phe Gln Ile
1 5 10 15
Ser Leu Leu Lys
20

<210> 77
 <211> 213
 <212> PRT
 <213> Dermatophagoides farinae (House-dust mite)

<400> 77
 Met Met Lys Phe Leu Leu Ile Ala Ala Val Ala Phe Val Ala Val Ser
 1 5 10 15
 Ala Asp Pro Ile His Tyr Asp Lys Ile Thr Glu Glu Ile Asn Lys Ala
 20 25 30
 Ile Asp Asp Ala Ile Ala Ala Ile Glu Gln Ser Glu Thr Ile Asp Pro
 35 40 45
 Met Lys Val Pro Asp His Ala Asp Lys Phe Glu Arg His Val Gly Ile
 50 55 60
 Val Asp Phe Lys Gly Glu Leu Ala Met Arg Asn Ile Glu Ala Arg Gly
 65 70 75 80
 Leu Lys Gln Met Lys Arg Gln Gly Asp Ala Asn Val Lys Gly Glu Glu
 85 90 95
 Gly Ile Val Lys Ala His Leu Leu Ile Gly Val His Asp Asp Ile Val
 100 105 110
 Ser Met Glu Tyr Asp Leu Ala Tyr Lys Leu Gly Asp Leu His Pro Thr
 115 120 125
 Thr His Val Ile Ser Asp Ile Gln Asp Phe Val Val Ala Leu Ser Leu
 130 135 140
 Glu Ile Ser Asp Glu Gly Asn Ile Thr Met Thr Ser Phe Glu Val Arg
 145 150 155 160
 Gln Phe Ala Asn Val Val Asn His Ile Gly Gly Leu Ser Ile Leu Asp
 165 170 175
 Pro Ile Phe Gly Val Leu Ser Asp Val Leu Thr Ala Ile Phe Gln Asp
 180 185 190
 Thr Val Arg Lys Glu Met Thr Lys Val Leu Ala Pro Ala Phe Lys Arg
 195 200 205
 Glu Leu Glu Lys Asn
 210

<210> 78
 <211> 30
 <212> PRT
 <213> Dermatophagoides microceras (House-dust mite)

<400> 78
 Thr Gln Ala Cys Arg Ile Asn Ser Gly Asn Val Pro Ser Glu Leu Asp
 1 5 10 15
 Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly
 20 25 30

<210> 79
 <211> 320
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 79
 Met Lys Ile Val Leu Ala Ile Ala Ser Leu Leu Ala Leu Ser Ala Val
 1 5 10 15

<220>
 <221> UNSURE
 <222> 3, 16
 <223> Xaa = any amino acid

<400> 82
 Lys Tyr Xaa Asn Pro His Phe Ile Gly Xaa Arg Ser Val Ile Thr Xaa
 1 5 10 15
 Leu Met Glu

<210> 83
 <211> 132
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 83
 Met Lys Phe Ile Ile Ala Phe Phe Val Ala Thr Leu Ala Val Met Thr
 1 5 10 15
 Val Ser Gly Glu Asp Lys Lys His Asp Tyr Gln Asn Glu Phe Asp Phe
 20 25 30
 Leu Leu Met Glu Arg Ile His Glu Gln Ile Lys Lys Gly Glu Leu Ala
 35 40 45
 Leu Phe Tyr Leu Gln Glu Gln Ile Asn His Phe Glu Glu Lys Pro Thr
 50 55 60
 Lys Glu Met Lys Asp Lys Ile Val Ala Glu Met Asp Thr Ile Ile Ala
 65 70 75 80
 Met Ile Asp Gly Val Arg Gly Val Leu Asp Arg Leu Met Gln Arg Lys
 85 90 95
 Asp Leu Asp Ile Phe Glu Gln Tyr Asn Leu Glu Met Ala Lys Lys Ser
 100 105 110
 Gly Asp Ile Leu Glu Arg Asp Leu Lys Lys Glu Glu Ala Arg Val Lys
 115 120 125
 Lys Ile Glu Val
 130

<210> 84
 <211> 20
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<220>
 <221> UNSURE
 <222> 4
 <223> Xaa = any amino acid

<400> 84
 Ala Ile Gly Xaa Gln Pro Ala Ala Glu Ala Glu Ala Pro Phe Gln Ile
 1 5 10 15
 Ser Leu Met Lys
 20

<210> 85

<211> 215
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 85

Met	Met	Lys	Leu	Leu	Leu	Ile	Ala	Ala	Ala	Ala	Phe	Val	Ala	Val	Ser
1				5					10					15	
Ala	Asp	Pro	Ile	His	Tyr	Asp	Lys	Ile	Thr	Glu	Glu	Ile	Asn	Lys	Ala
			20					25					30		
Val	Asp	Glu	Ala	Val	Ala	Ala	Ile	Glu	Lys	Ser	Glu	Thr	Phe	Asp	Pro
			35				40					45			
Met	Lys	Val	Pro	Asp	His	Ser	Asp	Lys	Phe	Glu	Arg	His	Ile	Gly	Ile
	50					55					60				
Ile	Asp	Leu	Lys	Gly	Glu	Leu	Asp	Met	Arg	Asn	Ile	Gln	Val	Arg	Gly
65					70					75					80
Leu	Lys	Gln	Met	Lys	Arg	Val	Gly	Asp	Ala	Asn	Val	Lys	Ser	Glu	Asp
				85					90					95	
Gly	Val	Val	Lys	Ala	His	Leu	Leu	Val	Gly	Val	His	Asp	Asp	Val	Val
			100					105					110		
Ser	Met	Glu	Tyr	Asp	Leu	Ala	Tyr	Lys	Leu	Gly	Asp	Leu	His	Pro	Asn
		115					120					125			
Thr	His	Val	Ile	Ser	Asp	Ile	Gln	Asp	Phe	Val	Val	Glu	Leu	Ser	Leu
		130				135						140			
Glu	Val	Ser	Glu	Glu	Gly	Asn	Met	Thr	Leu	Thr	Ser	Phe	Glu	Val	Arg
145					150					155					160
Gln	Phe	Ala	Asn	Val	Val	Asn	His	Ile	Gly	Gly	Leu	Ser	Ile	Leu	Asp
				165					170					175	
Pro	Ile	Phe	Ala	Val	Leu	Ser	Asp	Val	Leu	Thr	Ala	Ile	Phe	Gln	Asp
			180					185					190		
Thr	Val	Arg	Ala	Glu	Met	Thr	Lys	Val	Leu	Ala	Pro	Ala	Phe	Lys	Lys
		195					200					205			
Glu	Leu	Glu	Arg	Asn	Asn	Gln									
	210					215									

<210> 86
 <211> 203
 <212> PRT
 <213> Dolichovespula arenaria (Yellow hornet)

<400> 86

Asn	Asn	Tyr	Cys	Lys	Ile	Cys	Pro	Lys	Gly	Thr	His	Thr	Leu	Cys	Lys
1				5					10					15	
Tyr	Gly	Thr	Ser	Met	Lys	Pro	Asn	Cys	Gly	Gly	Lys	Ile	Val	Lys	Ser
			20					25					30		
Tyr	Gly	Val	Thr	Asn	Asp	Glu	Lys	Asn	Glu	Ile	Val	Lys	Arg	His	Asn
		35					40					45			
Glu	Phe	Arg	Gln	Lys	Val	Ala	Gln	Gly	Leu	Glu	Thr	Arg	Gly	Asn	Pro
	50					55					60				
Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Asn	Leu	Leu	Val	Trp	Asn	Asp
65					70					75					80
Glu	Leu	Ala	Lys	Ile	Ala	Gln	Thr	Trp	Ala	Asn	Gln	Cys	Asn	Phe	Gly
				85					90					95	
His	Asp	Gln	Cys	Arg	Asn	Thr	Ala	Lys	Tyr	Pro	Val	Gly	Gln	Asn	Val
		100						105					110		
Ala	Ile	Ala	Ser	Thr	Thr	Gly	Asn	Ser	Tyr	Gln	Thr	Met	Ser	Tyr	Leu
		115					120					125			

Ile	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	His	Lys	Asp
130						135					140				
Leu	Met	His	Asn	Asn	Phe	Ser	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val
145					150					155					160
Trp	Gly	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys	Tyr	Ile	Glu
				165					170					175	
Asn	Lys	Trp	His	Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly
			180					185					190		
Asn	Tyr	Met	Asn	Gln	Pro	Val	Tyr	Glu	Arg	Lys					
		195					200								

<210> 87

<211> 317

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 87

Arg	Leu	Ile	Met	Phe	Val	Gly	Asp	Pro	Ser	Ser	Ser	Asn	Glu	Leu	Asp
1				5					10					15	
Arg	Phe	Ser	Val	Cys	Pro	Phe	Ser	Asn	Asp	Thr	Val	Lys	Met	Ile	Phe
			20					25				30			
Leu	Thr	Arg	Glu	Asn	Arg	Lys	His	Asp	Phe	Tyr	Thr	Leu	Asp	Thr	Met
			35				40					45			
Asn	Arg	His	Asn	Glu	Phe	Lys	Lys	Ser	Ile	Ile	Lys	Arg	Pro	Val	Val
			50			55					60				
Phe	Ile	Thr	His	Gly	Phe	Thr	Ser	Ser	Ala	Thr	Glu	Lys	Asn	Phe	Val
65					70				75					80	
Ala	Met	Ser	Glu	Ala	Leu	Met	His	Thr	Gly	Asp	Phe	Leu	Ile	Ile	Met
				85					90					95	
Val	Asp	Trp	Arg	Met	Ala	Ala	Cys	Thr	Asp	Glu	Tyr	Pro	Gly	Leu	Lys
			100					105					110		
Tyr	Met	Phe	Tyr	Lys	Ala	Ala	Val	Gly	Asn	Thr	Arg	Leu	Val	Gly	Asn
			115				120					125			
Phe	Ile	Ala	Met	Ile	Ala	Lys	Lys	Leu	Val	Glu	Gln	Tyr	Lys	Val	Pro
	130					135					140				
Met	Thr	Asn	Ile	Arg	Leu	Val	Gly	His	Ser	Leu	Gly	Ala	His	Ile	Ser
145					150					155					160
Gly	Phe	Ala	Gly	Lys	Arg	Val	Gln	Glu	Leu	Lys	Leu	Gly	Lys	Phe	Ser
				165					170					175	
Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Gly	Pro	Ser	Phe	Lys	Lys	Asn	Asp
			180					185					190		
Cys	Ser	Glu	Arg	Ile	Cys	Glu	Thr	Asp	Ala	His	Tyr	Val	Gln	Ile	Leu
			195				200					205			
His	Thr	Ser	Ser	Asn	Leu	Gly	Thr	Glu	Arg	Thr	Leu	Gly	Thr	Val	Asp
	210					215					220				
Phe	Tyr	Ile	Asn	Asn	Gly	Ser	Asn	Gln	Pro	Gly	Cys	Arg	Tyr	Ile	Ile
225					230					235					240
Gly	Glu	Thr	Cys	Ser	His	Thr	Arg	Ala	Val	Lys	Tyr	Phe	Thr	Glu	Cys
				245					250					255	
Ile	Arg	Arg	Glu	Cys	Cys	Leu	Ile	Gly	Val	Pro	Gln	Ser	Lys	Asn	Pro
			260					265					270		
Gln	Pro	Val	Ser	Lys	Cys	Thr	Arg	Asn	Glu	Cys	Val	Cys	Val	Gly	Leu
		275					280					285			
Asn	Ala	Lys	Lys	Tyr	Pro	Lys	Arg	Gly	Ser	Phe	Tyr	Val	Pro	Val	Glu
	290					295					300				
Ala	Glu	Ala	Pro	Tyr	Cys	Asn	Asn	Asn	Gly	Lys	Ile	Ile			

305

310

315

<210> 88

<211> 303

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 88

Gly	Ile	Leu	Pro	Glu	Cys	Lys	Leu	Val	Pro	Glu	Glu	Ile	Ser	Phe	Val
1				5					10					15	
Leu	Ser	Thr	Arg	Glu	Asn	Arg	Asp	Gly	Val	Tyr	Leu	Thr	Leu	Gln	Lys
			20					25					30		
Leu	Lys	Asn	Gly	Lys	Met	Phe	Lys	Asn	Ser	Asp	Leu	Ser	Ser	Lys	Lys
		35					40					45			
Val	Pro	Phe	Leu	Ile	His	Gly	Phe	Ile	Ser	Ser	Ala	Thr	Asn	Lys	Asn
	50					55					60				
Tyr	Ala	Asp	Met	Thr	Arg	Ala	Leu	Leu	Asp	Lys	Asp	Asp	Ile	Met	Val
65					70				75					80	
Ile	Ser	Ile	Asp	Trp	Arg	Asp	Gly	Ala	Cys	Ser	Asn	Glu	Phe	Ala	Leu
			85					90						95	
Leu	Lys	Phe	Ile	Gly	Tyr	Pro	Lys	Ala	Val	Glu	Asn	Thr	Arg	Ala	Val
			100					105					110		
Gly	Lys	Tyr	Ile	Ala	Asp	Phe	Ser	Lys	Ile	Leu	Ile	Gln	Lys	Tyr	Lys
		115					120					125			
Val	Leu	Leu	Glu	Asn	Ile	Arg	Leu	Ile	Gly	His	Ser	Leu	Gly	Ala	Gln
	130					135					140				
Ile	Ala	Gly	Phe	Ala	Gly	Lys	Glu	Phe	Gln	Arg	Phe	Lys	Leu	Gly	Lys
145					150				155						160
Tyr	Pro	Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Gly	Pro	Ser	Phe	Lys	Lys
			165					170						175	
Lys	Asp	Cys	Pro	Glu	Arg	Ile	Cys	Glu	Thr	Asp	Ala	His	Tyr	Val	Gln
			180					185					190		
Ile	Leu	His	Thr	Ser	Ser	Asn	Leu	Gly	Thr	Glu	Arg	Thr	Leu	Gly	Thr
		195				200						205			
Val	Asp	Phe	Tyr	Ile	Asn	Asp	Gly	Ser	Asn	Gln	Pro	Gly	Cys	Thr	Tyr
	210					215					220				
Ile	Ile	Gly	Glu	Thr	Cys	Ser	His	Thr	Arg	Ala	Val	Lys	Tyr	Leu	Thr
225					230				235						240
Glu	Cys	Ile	Arg	Arg	Glu	Cys	Cys	Leu	Ile	Gly	Val	Pro	Gln	Ser	Lys
			245					250						255	
Asn	Pro	Gln	Pro	Val	Ser	Lys	Cys	Thr	Arg	Asn	Glu	Cys	Val	Cys	Val
			260					265					270		
Gly	Leu	Asn	Ala	Lys	Glu	Tyr	Pro	Lys	Lys	Gly	Ser	Phe	Tyr	Val	Pro
		275					280					285			
Val	Glu	Ala	Lys	Ala	Pro	Phe	Cys	Asn	Asn	Asn	Gly	Lys	Ile	Ile	
	290					295					300				

<210> 89

<211> 331

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 89

Ser	Glu	Arg	Pro	Lys	Arg	Val	Phe	Asn	Ile	Tyr	Trp	Asn	Val	Pro	Thr
1				5					10					15	

65					70					75				80
Gly	Leu	Glu	Thr	Arg	Gly	Lys	Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys
				85					90				95	Asn
Met	Asn	Val	Leu	Val	Trp	Asn	Asp	Glu	Leu	Ala	Lys	Ile	Ala	Gln
			100					105					110	Thr
Trp	Ala	Asn	Gln	Cys	Asp	Phe	Asn	His	Asp	Asp	Cys	Arg	Asn	Thr
		115					120					125		Ala
Lys	Tyr	Gln	Val	Gly	Gln	Asn	Ile	Ala	Ile	Ser	Ser	Thr	Thr	Ala
	130					135					140			Thr
Gln	Phe	Asp	Arg	Pro	Ser	Lys	Leu	Ile	Lys	Gln	Trp	Glu	Asp	Glu
145					150					155				Val
Thr	Glu	Phe	Asn	Tyr	Lys	Val	Gly	Leu	Gln	Asn	Ser	Asn	Phe	Arg
			165						170				175	Lys
Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp	Gly	Lys	Thr	Lys	Glu	Ile
		180						185					190	Gly
Cys	Gly	Ser	Ile	Lys	Tyr	Ile	Glu	Asp	Asn	Trp	Tyr	Thr	His	Tyr
	195					200					205			Leu
Val	Cys	Asn	Tyr	Gly	Pro	Gly	Gly	Asn	Asp	Phe	Asn	Gln	Pro	Ile
	210					215					220			Tyr
Glu	Arg	Lys												
225														

<210> 91
 <211> 215
 <212> PRT
 <213> Dolichovespula maculata (White-face hornet)

<400> 91														
Pro	Ile	Ile	Asn	Leu	Ser	Phe	Gly	Glu	Ala	Asn	Asn	Tyr	Cys	Lys
1				5					10				15	Ile
Lys	Cys	Ser	Arg	Gly	Ile	His	Thr	Leu	Cys	Lys	Phe	Gly	Thr	Ser
			20					25				30		Met
Lys	Pro	Asn	Cys	Gly	Ser	Lys	Leu	Val	Lys	Val	His	Gly	Val	Ser
		35					40					45		Asn
Asp	Glu	Lys	Asn	Glu	Ile	Val	Asn	Arg	His	Asn	Gln	Phe	Arg	Gln
	50					55					60			Lys
Val	Ala	Lys	Gly	Leu	Glu	Thr	Arg	Gly	Asn	Pro	Gly	Pro	Gln	Pro
65				70					75					80
Ala	Lys	Asn	Met	Asn	Val	Leu	Val	Trp	Asn	Asp	Glu	Leu	Ala	Lys
				85					90				95	Ile
Ala	Gln	Thr	Trp	Ala	Asn	Gln	Cys	Ser	Phe	Gly	His	Asp	Gln	Cys
		100					105					110		Arg
Asn	Thr	Glu	Lys	Tyr	Gln	Val	Gly	Gln	Asn	Val	Ala	Ile	Ala	Ser
	115					120						125		Thr
Thr	Gly	Asn	Ser	Tyr	Ala	Thr	Met	Ser	Lys	Leu	Ile	Glu	Met	Trp
	130					135					140			Glu
Asn	Glu	Val	Lys	Asp	Phe	Asn	Pro	Lys	Lys	Gly	Thr	Met	Gly	Asp
145				150						155				Asn
Asn	Phe	Ser	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp	Gly	Lys
			165						170				175	Thr
Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys	Tyr	Ile	Glu	Asn	Asn	Trp
		180						185				190		His
Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly	Asn	Tyr	Met
	195					200						205		Asp
Gln	Pro	Ile	Tyr	Gln	Arg	Lys								
	210					215								

<210> 92
 <211> 187
 <212> PRT
 <213> Equus caballus (Horse)

<400> 92
 Met Lys Leu Leu Leu Cys Leu Gly Leu Ile Leu Val Cys Ala Gln
 1 5 10 15
 Gln Glu Glu Asn Ser Asp Val Ala Ile Arg Asn Phe Asp Ile Ser Lys
 20 25 30
 Ile Ser Gly Glu Trp Tyr Ser Ile Phe Leu Ala Ser Asp Val Lys Glu
 35 40 45
 Lys Ile Glu Glu Asn Gly Ser Met Arg Val Phe Val Asp Val Ile Arg
 50 55 60
 Ala Leu Asp Asn Ser Ser Leu Tyr Ala Glu Tyr Gln Thr Lys Val Asn
 65 70 75 80
 Gly Glu Cys Thr Glu Phe Pro Met Val Phe Asp Lys Thr Glu Glu Asp
 85 90 95
 Gly Val Tyr Ser Leu Asn Tyr Asp Gly Tyr Asn Val Phe Arg Ile Ser
 100 105 110
 Glu Phe Glu Asn Asp Glu His Ile Ile Leu Tyr Leu Val Asn Phe Asp
 115 120 125
 Lys Asp Arg Pro Phe Gln Leu Phe Glu Phe Tyr Ala Arg Glu Pro Asp
 130 135 140
 Val Ser Pro Glu Ile Lys Glu Glu Phe Val Lys Ile Val Gln Lys Arg
 145 150 155 160
 Gly Ile Val Lys Glu Asn Ile Ile Asp Leu Thr Lys Ile Asp Arg Cys
 165 170 175
 Phe Gln Leu Arg Gly Asn Gly Val Ala Gln Ala
 180 185

<210> 93
 <211> 29
 <212> PRT
 <213> Equus caballus (Horse)

<220>
 <221> UNSURE
 <222> 3, 28
 <223> Xaa = any amino acid

<400> 93
 Ser Gln Xaa Pro Gln Ser Glu Thr Asp Tyr Ser Gln Leu Ser Gly Glu
 1 5 10 15
 Trp Asn Thr Ile Tyr Gly Ala Ala Ser Asn Ile Xaa Lys
 20 25

<210> 94
 <211> 19
 <212> PRT
 <213> Equus caballus (Horse)

<220>

<221> UNSURE

<222> 1

<223> Xaa = any amino acid

<400> 94

Xaa Gln Asp Pro Gln Ser Glu Thr Asp Tyr Ser Gln Leu Ser Gly Glu
1 5 10 15
Trp Asn Thr

<210> 95

<211> 211

<212> PRT

<213> Euroglyphus maynei (House-dust mite)

<400> 95

Thr Tyr Ala Cys Ser Ile Asn Ser Val Ser Leu Pro Ser Glu Leu Asp
1 5 10 15
Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
20 25 30
Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ser Thr Glu Ser Ala Tyr
35 40 45
Leu Ala Tyr Arg Asn Met Ser Leu Asp Leu Ala Glu Gln Glu Leu Val
50 55 60
Asp Cys Ala Ser Gln Asn Gly Cys His Gly Asp Thr Ile Pro Arg Gly
65 70 75 80
Ile Glu Tyr Ile Gln Gln Asn Gly Val Val Gln Glu His Tyr Tyr Pro
85 90 95
Tyr Val Ala Arg Glu Gln Ser Cys His Arg Pro Asn Ala Gln Arg Tyr
100 105 110
Gly Leu Lys Asn Tyr Cys Gln Ile Ser Pro Pro Asp Ser Asn Lys Ile
115 120 125
Arg Gln Ala Leu Thr Gln Thr His Thr Ala Val Ala Val Ile Ile Gly
130 135 140
Ile Lys Asp Leu Asn Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Met
145 150 155 160
Gln His Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val
165 170 175
Gly Tyr Gly Asn Thr Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser
180 185 190
Trp Asp Thr Thr Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn
195 200 205
Ile Asn Leu
210

<210> 96

<211> 92

<212> PRT

<213> Felis silvestris catus (Cat)

<400> 96

Met Lys Gly Ala Cys Val Leu Val Leu Leu Trp Ala Ala Leu Leu Leu
1 5 10 15
Ile Ser Gly Gly Asn Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val
20 25 30

Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala
 35 40 45
 Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys
 50 55 60
 Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu
 65 70 75 80
 Ser Val Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys
 85 90

<210> 97
 <211> 88
 <212> PRT
 <213> Felis silvestris catus (Cat)

<400> 97
 Met Leu Asp Ala Ala Leu Pro Pro Cys Pro Thr Val Ala Ala Thr Ala
 1 5 10 15
 Asp Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu
 20 25 30
 Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala
 35 40 45
 Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp
 50 55 60
 Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp
 65 70 75 80
 Lys Ile Tyr Thr Ser Pro Leu Cys
 85

<210> 98
 <211> 109
 <212> PRT
 <213> Felis silvestris catus (Cat)

<400> 98
 Met Arg Gly Ala Leu Leu Val Leu Ala Leu Leu Val Thr Gln Ala Leu
 1 5 10 15
 Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe
 20 25 30
 Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys
 35 40 45
 Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp
 50 55 60
 Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val
 65 70 75 80
 Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln
 85 90 95
 Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg
 100 105

<210> 99
 <211> 113
 <212> PRT
 <213> Gadus callarias (Baltic cod)

<400> 99

Ala Phe Lys Gly Ile Leu Ser Asn Ala Asp Ile Lys Ala Ala Glu Ala
1 5 10 15
Ala Cys Phe Lys Glu Gly Ser Phe Asp Glu Asp Gly Phe Tyr Ala Lys
20 25 30
Val Gly Leu Asp Ala Phe Ser Ala Asp Glu Leu Lys Lys Leu Phe Lys
35 40 45
Ile Ala Asp Glu Asp Lys Glu Gly Phe Ile Glu Glu Asp Glu Leu Lys
50 55 60
Leu Phe Leu Ile Ala Phe Ala Ala Asp Leu Arg Ala Leu Thr Asp Ala
65 70 75 80
Glu Thr Lys Ala Phe Leu Lys Ala Gly Asp Ser Asp Gly Asp Gly Lys
85 90 95
Ile Gly Val Asp Glu Phe Gly Ala Leu Val Asp Lys Trp Gly Ala Lys
100 105 110
Gly

<210> 100

<211> 210

<212> PRT

<213> Gallus gallus (Chicken)

<400> 100

Met Ala Met Ala Gly Val Phe Val Leu Phe Ser Phe Val Leu Cys Gly
1 5 10 15
Phe Leu Pro Asp Ala Ala Phe Gly Ala Glu Val Asp Cys Ser Arg Phe
20 25 30
Pro Asn Ala Thr Asp Lys Glu Gly Lys Asp Val Leu Val Cys Asn Lys
35 40 45
Asp Leu Arg Pro Ile Cys Gly Thr Asp Gly Val Thr Tyr Thr Asn Asp
50 55 60
Cys Leu Leu Cys Ala Tyr Ser Ile Glu Phe Gly Thr Asn Ile Ser Lys
65 70 75 80
Glu His Asp Gly Glu Cys Lys Glu Thr Val Pro Met Asn Cys Ser Ser
85 90 95
Tyr Ala Asn Thr Thr Ser Glu Asp Gly Lys Val Met Val Leu Cys Asn
100 105 110
Arg Ala Phe Asn Pro Val Cys Gly Thr Asp Gly Val Thr Tyr Asp Asn
115 120 125
Glu Cys Leu Leu Cys Ala His Lys Val Glu Gln Gly Ala Ser Val Asp
130 135 140
Lys Arg His Asp Gly Gly Cys Arg Lys Glu Leu Ala Ala Val Ser Val
145 150 155 160
Asp Cys Ser Glu Tyr Pro Lys Pro Asp Cys Thr Ala Glu Asp Arg Pro
165 170 175
Leu Cys Gly Ser Asp Asn Lys Thr Tyr Gly Asn Lys Cys Asn Phe Cys
180 185 190
Asn Ala Val Val Glu Ser Asn Gly Thr Leu Thr Leu Ser His Phe Gly
195 200 205
Lys Cys
210

<210> 101

<211> 385

<212> PRT

<213> Gallus gallus (Chicken)

<400> 101

Gly Ser Ile Gly Ala Ala Ser Met Glu Phe Cys Phe Asp Val Phe Lys
1 5 10 15
Glu Leu Lys Val His His Ala Asn Glu Asn Ile Phe Tyr Cys Pro Ile
20 25 30
Ala Ile Met Ser Ala Leu Ala Met Val Tyr Leu Gly Ala Lys Asp Ser
35 40 45
Thr Arg Thr Gln Ile Asn Lys Val Val Arg Phe Asp Lys Leu Pro Gly
50 55 60
Phe Gly Asp Ser Ile Glu Ala Gln Cys Gly Thr Ser Val Asn Val His
65 70 75 80
Ser Ser Leu Arg Asp Ile Leu Asn Gln Ile Thr Lys Pro Asn Asp Val
85 90 95
Tyr Ser Phe Ser Leu Ala Ser Arg Leu Tyr Ala Glu Glu Arg Tyr Pro
100 105 110
Ile Leu Pro Glu Tyr Leu Gln Cys Val Lys Glu Leu Tyr Arg Gly Gly
115 120 125
Leu Glu Pro Ile Asn Phe Gln Thr Ala Ala Asp Gln Ala Arg Glu Leu
130 135 140
Ile Asn Ser Trp Val Glu Ser Gln Thr Asn Gly Ile Ile Arg Asn Val
145 150 155 160
Leu Gln Pro Ser Ser Val Asp Ser Gln Thr Ala Met Val Leu Val Asn
165 170 175
Ala Ile Val Phe Lys Gly Leu Trp Glu Lys Ala Phe Lys Asp Glu Asp
180 185 190
Thr Gln Ala Met Pro Phe Arg Val Thr Glu Gln Glu Ser Lys Pro Val
195 200 205
Gln Met Met Tyr Gln Ile Gly Leu Phe Arg Val Ala Ser Met Ala Ser
210 215 220
Glu Lys Met Lys Ile Leu Glu Leu Pro Phe Ala Ser Gly Thr Met Ser
225 230 235 240
Met Leu Val Leu Leu Pro Asp Glu Val Ser Gly Leu Glu Gln Leu Glu
245 250 255
Ser Ile Ile Asn Phe Glu Lys Leu Thr Glu Trp Thr Ser Ser Asn Val
260 265 270
Met Glu Glu Arg Lys Ile Lys Val Tyr Leu Pro Arg Met Lys Met Glu
275 280 285
Glu Lys Tyr Asn Leu Thr Ser Val Leu Met Ala Met Gly Ile Thr Asp
290 295 300
Val Phe Ser Ser Ser Ala Asn Leu Ser Gly Ile Ser Ser Ala Glu Ser
305 310 315 320
Leu Lys Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu
325 330 335
Ala Gly Arg Glu Val Val Gly Ser Ala Glu Ala Gly Val Asp Ala Ala
340 345 350
Ser Val Ser Glu Glu Phe Arg Ala Asp His Pro Phe Leu Phe Cys Ile
355 360 365
Lys His Ile Ala Thr Asn Ala Val Leu Phe Phe Gly Arg Cys Val Ser
370 375 380
Pro
385

<210> 102

<211> 705
 <212> PRT
 <213> Gallus gallus (Chicken)

<400> 102

Met	Lys	Leu	Ile	Leu	Cys	Thr	Val	Leu	Ser	Leu	Gly	Ile	Ala	Ala	Val
1				5					10					15	
Cys	Phe	Ala	Ala	Pro	Pro	Lys	Ser	Val	Ile	Arg	Trp	Cys	Thr	Ile	Ser
		20						25					30		
Ser	Pro	Glu	Lys	Lys	Cys	Asn	Asn	Leu	Arg	Asp	Leu	Thr	Gln	Gln	
	35					40					45				
Glu	Arg	Ile	Ser	Leu	Thr	Cys	Val	Gln	Lys	Ala	Thr	Tyr	Leu	Asp	Cys
	50					55					60				
Ile	Lys	Ala	Ile	Ala	Asn	Asn	Glu	Ala	Asp	Ala	Ile	Ser	Leu	Asp	Gly
65					70				75					80	
Gly	Gln	Ala	Phe	Glu	Ala	Gly	Leu	Ala	Pro	Tyr	Lys	Leu	Lys	Pro	Ile
			85						90					95	
Ala	Ala	Glu	Val	Tyr	Glu	His	Thr	Glu	Gly	Ser	Thr	Thr	Ser	Tyr	Tyr
			100					105					110		
Ala	Val	Ala	Val	Val	Lys	Lys	Gly	Thr	Gln	Phe	Thr	Val	Asn	Asp	Leu
		115					120					125			
Gln	Gly	Lys	Thr	Ser	Cys	His	Thr	Gly	Leu	Gly	Arg	Ser	Ala	Gly	Trp
	130					135					140				
Asn	Ile	Pro	Ile	Gly	Thr	Leu	Leu	His	Arg	Gly	Ala	Ile	Glu	Trp	Glu
145					150				155					160	
Gly	Ile	Glu	Ser	Gly	Ser	Val	Glu	Gln	Ala	Val	Ala	Lys	Phe	Phe	Ser
			165						170					175	
Ala	Ser	Cys	Val	Pro	Gly	Ala	Thr	Ile	Glu	Gln	Lys	Leu	Cys	Arg	Gln
		180						185					190		
Cys	Lys	Gly	Asp	Pro	Lys	Thr	Lys	Cys	Ala	Arg	Asn	Ala	Pro	Tyr	Ser
	195						200					205			
Gly	Tyr	Ser	Gly	Ala	Phe	His	Cys	Leu	Lys	Asp	Gly	Lys	Gly	Asp	Val
	210					215					220				
Ala	Phe	Val	Lys	His	Thr	Thr	Val	Asn	Glu	Asn	Ala	Pro	Asp	Gln	Lys
225					230				235					240	
Asp	Glu	Tyr	Glu	Leu	Leu	Cys	Leu	Asp	Gly	Ser	Arg	Gln	Pro	Val	Asp
			245						250					255	
Asn	Tyr	Lys	Thr	Cys	Asn	Trp	Ala	Arg	Val	Ala	Ala	His	Ala	Val	Val
		260					265					270			
Ala	Arg	Asp	Asp	Asn	Lys	Val	Glu	Asp	Ile	Trp	Ser	Phe	Leu	Ser	Lys
		275					280					285			
Ala	Gln	Ser	Asp	Phe	Gly	Val	Asp	Thr	Lys	Ser	Asp	Phe	His	Leu	Phe
	290				295						300				
Gly	Pro	Pro	Gly	Lys	Lys	Asp	Pro	Val	Leu	Lys	Asp	Leu	Leu	Phe	Lys
305					310				315					320	
Asp	Ser	Ala	Ile	Met	Leu	Lys	Arg	Val	Pro	Ser	Leu	Met	Asp	Ser	Gln
			325						330				335		
Leu	Tyr	Leu	Gly	Phe	Glu	Tyr	Tyr	Ser	Ala	Ile	Gln	Ser	Met	Arg	Lys
		340						345					350		
Asp	Gln	Leu	Thr	Pro	Ser	Pro	Arg	Glu	Asn	Arg	Ile	Gln	Trp	Cys	Ala
		355					360					365			
Val	Gly	Lys	Asp	Glu	Lys	Ser	Lys	Cys	Asp	Arg	Trp	Ser	Val	Val	Ser
	370					375					380				
Asn	Gly	Asp	Val	Glu	Cys	Thr	Val	Val	Asp	Glu	Thr	Lys	Asp	Cys	Ile
385					390				395					400	
Ile	Lys	Ile	Met	Lys	Gly	Glu	Ala	Asp	Ala	Val	Ala	Leu	Asp	Gly	Gly
				405					410					415	

85 90 95
 Pro Cys Ser Ala Leu Leu Ser Ser Asp Ile Thr Ala Ser Val Asn Cys
 100 105 110
 Ala Lys Lys Ile Val Ser Asp Gly Asn Gly Met Asn Ala Trp Val Ala
 115 120 125
 Trp Arg Asn Arg Cys Lys Gly Thr Asp Val Gln Ala Trp Ile Arg Gly
 130 135 140
 Cys Arg Leu
 145

<210> 104
 <211> 133
 <212> PRT
 <213> Helianthus annuus (Common sunflower)

<400> 104
 Met Ser Trp Gln Ala Tyr Val Asp Glu His Leu Met Cys Asp Ile Glu
 1 5 10 15
 Gly Thr Gly Gln His Leu Thr Ser Ala Ala Ile Leu Gly Leu Asp Gly
 20 25 30
 Thr Val Trp Ala Gln Ser Ala Lys Phe Pro Gln Phe Lys Pro Glu Glu
 35 40 45
 Met Lys Gly Ile Ile Lys Glu Phe Asp Glu Ala Gly Thr Leu Ala Pro
 50 55 60
 Thr Gly Met Phe Ile Ala Gly Ala Lys Tyr Met Val Leu Gln Gly Glu
 65 70 75 80
 Pro Gly Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Cys Ile
 85 90 95
 Lys Lys Thr Gly Gln Ala Met Ile Met Gly Ile Tyr Asp Glu Pro Val
 100 105 110
 Ala Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
 115 120 125
 Leu Glu Gln Gly Met
 130

<210> 105
 <211> 137
 <212> PRT
 <213> Hevea brasiliensis (Para rubber tree)

<400> 105
 Ala Glu Asp Glu Asp Asn Gln Gln Gly Gln Gly Glu Gly Leu Lys Tyr
 1 5 10 15
 Leu Gly Phe Val Gln Asp Ala Ala Thr Tyr Ala Val Thr Thr Phe Ser
 20 25 30
 Asn Val Tyr Leu Phe Ala Lys Asp Lys Ser Gly Pro Leu Gln Pro Gly
 35 40 45
 Val Asp Ile Ile Glu Gly Pro Val Lys Asn Val Ala Val Pro Leu Tyr
 50 55 60
 Asn Arg Phe Ser Tyr Ile Pro Asn Gly Ala Leu Lys Phe Val Asp Ser
 65 70 75 80
 Thr Val Val Ala Ser Val Thr Ile Ile Asp Arg Ser Leu Pro Pro Ile
 85 90 95
 Val Lys Asp Ala Ser Ile Gln Val Val Ser Ala Ile Arg Ala Ala Pro
 100 105 110

Glu Ala Ala Arg Ser Leu Ala Ser Ser Leu Pro Gly Gln Thr Lys Ile
 115 120 125
 Leu Ala Lys Val Phe Tyr Gly Glu Asn
 130 135

<210> 106
 <211> 150
 <212> PRT
 <213> Hevea brasiliensis (Para rubber tree)

<400> 106
 Ala Ser Val Glu Val Glu Ser Ala Ala Thr Ala Leu Pro Lys Asn Glu
 1 5 10 15
 Thr Pro Glu Val Thr Lys Ala Glu Glu Thr Lys Thr Glu Glu Pro Ala
 20 25 30
 Ala Pro Pro Ala Ser Glu Gln Glu Thr Ala Asp Ala Thr Pro Glu Lys
 35 40 45
 Glu Glu Pro Thr Ala Ala Pro Ala Glu Pro Glu Ala Pro Ala Pro Glu
 50 55 60
 Thr Glu Lys Ala Glu Glu Val Glu Lys Ile Glu Lys Thr Glu Glu Pro
 65 70 75 80
 Ala Pro Glu Ala Asp Gln Thr Thr Pro Glu Glu Lys Pro Ala Glu Pro
 85 90 95
 Glu Pro Val Ala Glu Glu Glu Pro Lys His Glu Thr Lys Glu Thr Glu
 100 105 110
 Thr Glu Ala Pro Ala Ala Pro Ala Glu Gly Glu Lys Pro Ala Glu Glu
 115 120 125
 Glu Lys Pro Ile Thr Glu Ala Ala Glu Thr Ala Thr Glu Val Pro
 130 135 140
 Val Glu Lys Thr Glu Glu
 145 150

<210> 107
 <211> 265
 <212> PRT
 <213> Holcus lanatus (Velvet grass)

<400> 107
 Met Ala Ser Ser Ser Arg Ser Val Leu Leu Leu Val Ala Ala Leu Phe
 1 5 10 15
 Ala Val Phe Leu Gly Ser Ala His Gly Ile Ala Lys Val Pro Pro Gly
 20 25 30
 Pro Asn Ile Thr Ala Thr Tyr Gly Asp Glu Trp Leu Asp Ala Lys Ser
 35 40 45
 Thr Trp Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly
 50 55 60
 Ala Cys Gly Tyr Lys Asp Val Asp Lys Pro Pro Phe Ser Gly Met Thr
 65 70 75 80
 Gly Cys Gly Asn Thr Pro Ile Phe Lys Asp Gly Arg Gly Cys Gly Ser
 85 90 95
 Cys Phe Glu Ile Lys Cys Thr Lys Pro Glu Ser Cys Ser Gly Glu Pro
 100 105 110
 Val Thr Val His Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr
 115 120 125
 His Phe Asp Leu Ser Gly His Ala Phe Gly Ser Met Ala Lys Lys Gly

50 55 60
 Thr Ala Ser Ala Arg Phe Trp Gly Arg Thr Gly Cys Thr Phe Asp Ala
 65 70 75 80
 Ser Gly Lys Gly Ser Cys Gln Thr Gly Asp Cys Gly Gly Gln Leu Ser
 85 90 95
 Cys Thr Val Ser Gly Ala Val Pro Ala Thr Leu Ala Glu Tyr Thr Gln
 100 105 110
 Ser Asp Gln Asp Tyr Tyr Asp Val Ser Leu Val Asp Gly Phe Asn Ile
 115 120 125
 Pro Leu Ala Ile Asn Pro Thr Asn Ala Gln Cys Thr Ala Pro Ala Cys
 130 135 140
 Lys Ala Asp Ile Asn Ala Val Cys Pro Ser Glu Leu Lys Val Asp Gly
 145 150 155 160
 Gly Cys Asn Ser Ala Cys Asn Val Phe Lys Thr Asp Gln Tyr Cys Cys
 165 170 175
 Arg Asn Ala Tyr Val Asp Asn Cys Pro Ala Thr Asn Tyr Ser Lys Ile
 180 185 190
 Phe Lys Asn Gln Cys Pro Gln Ala Tyr Ser Tyr Ala Lys Asp Asp Thr
 195 200 205
 Ala Thr Phe Ala Cys Ala Ser Gly Thr Asp Tyr Ser Ile Val Phe Cys
 210 215 220
 Pro
 225

<210> 111
 <211> 141
 <212> PRT
 <213> Lepidoglyphus destructor (Storage mite)

<400> 111
 Met Met Lys Phe Ile Ala Leu Phe Ala Leu Val Ala Val Ala Ser Ala
 1 5 10 15
 Gly Lys Met Thr Phe Lys Asp Cys Gly His Gly Glu Val Thr Glu Leu
 20 25 30
 Asp Ile Thr Gly Cys Ser Gly Asp Thr Cys Val Ile His Arg Gly Glu
 35 40 45
 Lys Met Thr Leu Glu Ala Lys Phe Ala Ala Asn Gln Asp Thr Ala Lys
 50 55 60
 Val Thr Ile Lys Val Leu Ala Lys Val Ala Gly Thr Thr Ile Gln Val
 65 70 75 80
 Pro Gly Leu Glu Thr Asp Gly Cys Lys Phe Ile Lys Cys Pro Val Lys
 85 90 95
 Lys Gly Glu Ala Leu Asp Phe Ile Tyr Ser Gly Thr Ile Pro Ala Ile
 100 105 110
 Thr Pro Lys Val Lys Ala Asp Val Thr Ala Glu Leu Ile Gly Asp His
 115 120 125
 Gly Val Met Ala Cys Gly Thr Val His Gly Gln Val Glu
 130 135 140

<210> 112
 <211> 263
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 112

Met	Ala	Ser	Ser	Ser	Ser	Val	Leu	Leu	Val	Val	Ala	Leu	Phe	Ala	Val
1				5					10					15	
Phe	Leu	Gly	Ser	Ala	His	Gly	Ile	Ala	Lys	Val	Pro	Pro	Gly	Pro	Asn
			20					25					30		
Ile	Thr	Ala	Glu	Tyr	Gly	Asp	Lys	Trp	Leu	Asp	Ala	Lys	Ser	Thr	Trp
		35				40						45			
Tyr	Gly	Lys	Pro	Thr	Gly	Ala	Gly	Pro	Lys	Asp	Asn	Gly	Gly	Ala	Cys
	50					55					60				
Gly	Tyr	Lys	Asn	Val	Asp	Lys	Ala	Pro	Phe	Asn	Gly	Met	Thr	Gly	Cys
65					70					75					80
Gly	Asn	Thr	Pro	Ile	Phe	Lys	Asp	Gly	Arg	Gly	Cys	Gly	Ser	Cys	Phe
				85					90					95	
Glu	Ile	Lys	Cys	Thr	Lys	Pro	Glu	Ser	Cys	Ser	Gly	Glu	Ala	Val	Thr
			100					105					110		
Val	Thr	Ile	Thr	Asp	Asp	Asn	Glu	Glu	Pro	Ile	Ala	Pro	Tyr	His	Phe
		115					120					125			
Asp	Leu	Ser	Gly	His	Ala	Phe	Gly	Ser	Met	Ala	Lys	Lys	Gly	Glu	Glu
	130					135					140				
Gln	Asn	Val	Arg	Ser	Ala	Gly	Glu	Leu	Glu	Leu	Gln	Phe	Arg	Arg	Val
145					150					155					160
Lys	Cys	Lys	Tyr	Pro	Asp	Asp	Thr	Lys	Pro	Thr	Phe	His	Val	Glu	Lys
				165					170					175	
Ala	Ser	Asn	Pro	Asn	Tyr	Leu	Ala	Ile	Leu	Val	Lys	Tyr	Val	Asp	Gly
			180					185					190		
Asp	Gly	Asp	Val	Val	Ala	Val	Asp	Ile	Lys	Glu	Lys	Gly	Lys	Asp	Lys
		195					200					205			
Trp	Ile	Glu	Leu	Lys	Glu	Ser	Trp	Gly	Ala	Val	Trp	Arg	Ile	Asp	Thr
	210					215					220				
Pro	Asp	Lys	Leu	Thr	Gly	Pro	Phe	Thr	Val	Arg	Tyr	Thr	Thr	Glu	Gly
225					230					235					240
Gly	Thr	Lys	Ser	Glu	Phe	Glu	Asp	Val	Ile	Pro	Glu	Gly	Trp	Lys	Ala
				245					250					255	
Asp	Thr	Ser	Tyr	Ser	Ala	Lys									
			260												

<210> 113
 <211> 97
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 113

Ala	Ala	Pro	Val	Glu	Phe	Thr	Val	Glu	Lys	Gly	Ser	Asp	Glu	Lys	Asn
1				5					10					15	
Leu	Ala	Leu	Ser	Ile	Lys	Tyr	Asn	Lys	Glu	Gly	Asp	Ser	Met	Ala	Glu
			20					25					30		
Val	Glu	Leu	Lys	Glu	His	Gly	Ser	Asn	Glu	Trp	Leu	Ala	Leu	Lys	Lys
		35				40						45			
Asn	Gly	Asp	Gly	Val	Trp	Glu	Ile	Lys	Ser	Asp	Lys	Pro	Leu	Lys	Gly
	50					55					60				
Pro	Phe	Asn	Phe	Arg	Phe	Val	Ser	Glu	Lys	Gly	Met	Arg	Asn	Val	Phe
65					70					75					80
Asp	Asp	Val	Val	Pro	Ala	Asp	Phe	Lys	Val	Gly	Thr	Thr	Tyr	Lys	Pro
				85					90					95	

Glu

<210> 114
 <211> 97
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 114
 Thr Lys Val Asp Leu Thr Val Glu Lys Gly Ser Asp Ala Lys Thr Leu
 1 5 10 15
 Val Leu Asn Ile Lys Tyr Thr Arg Pro Gly Asp Thr Leu Ala Glu Val
 20 25 30
 Glu Leu Arg Gln His Gly Ser Glu Trp Glu Pro Met Thr Lys Lys
 35 40 45
 Gly Asn Leu Trp Glu Val Lys Ser Ala Lys Pro Leu Thr Gly Pro Met
 50 55 60
 Asn Phe Arg Phe Leu Ser Lys Gly Gly Met Lys Asn Val Phe Asp Glu
 65 70 75 80
 Val Ile Pro Thr Ala Phe Thr Val Gly Lys Thr Tyr Thr Pro Glu Tyr
 85 90 95
 Asn

<210> 115
 <211> 308
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 115
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Arg Arg Gly Pro
 1 5 10 15
 Arg Gly Gly Pro Gly Arg Ser Tyr Ala Ala Asp Ala Gly Tyr Thr Pro
 20 25 30
 Ala Ala Ala Ala Thr Pro Ala Thr Pro Ala Ala Thr Pro Ala Gly Gly
 35 40 45
 Trp Arg Glu Gly Asp Asp Arg Arg Ala Glu Ala Ala Gly Gly Arg Gln
 50 55 60
 Arg Leu Ala Ser Arg Gln Pro Trp Pro Pro Leu Pro Thr Pro Leu Arg
 65 70 75 80
 Arg Thr Ser Ser Arg Ser Ser Arg Pro Pro Ser Pro Ser Pro Pro Arg
 85 90 95
 Ala Ser Ser Pro Thr Ser Ala Ala Lys Ala Pro Gly Leu Ile Pro Lys
 100 105 110
 Leu Asp Thr Ala Tyr Asp Val Ala Tyr Lys Ala Ala Glu Ala His Pro
 115 120 125
 Arg Gly Gln Val Arg Arg Leu Arg His Cys Pro His Arg Ser Leu Arg
 130 135 140
 Val Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Ala Thr Glu
 145 150 155 160
 Glu Val Leu Ala Ala Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp
 165 170 175
 Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala Ala
 180 185 190
 Pro Thr Asn Asp Lys Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala
 195 200 205
 Leu Asn Glu Cys Thr Gly Gly Ala Met Arg Pro Thr Ser Ser Ser Pro
 210 215 220

Pro Ser Arg Pro Arg Ser Ser Arg Pro Thr Pro Pro Pro Ser Pro Ala
 225 230 235 240
 Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala
 245 250 255
 Ile Thr Ala Met Thr Gln Ala Gln Lys Ala Gly Lys Pro Ala Ala Ala
 260 265 270
 Ala Ala Thr Ala Ala Ala Thr Val Ala Thr Ala Ala Ala Thr Ala Ala
 275 280 285
 Ala Val Leu Pro Pro Pro Leu Leu Val Val Gln Ser Leu Ile Ser Leu
 290 295 300
 Leu Ile Tyr Tyr
 305

<210> 116
 <211> 339
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 116
 Met Ala Val Gln Lys His Thr Val Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
 20 25 30
 Ala Thr Pro Ala Thr Pro Ala Ala Pro Ala Thr Ala Ala Thr Pro Ala
 35 40 45
 Thr Pro Ala Thr Pro Ala Thr Pro Ala Ala Val Pro Ser Gly Lys Ala
 50 55 60
 Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys
 65 70 75 80
 Ala Ala Val Ala Ala Ala Val Val Pro Pro Ala Asp Lys Tyr Lys
 85 90 95
 Thr Phe Val Glu Thr Phe Gly Thr Ala Thr Asn Lys Ala Phe Val Glu
 100 105 110
 Gly Leu Ala Ser Gly Tyr Ala Asp Gln Ser Lys Asn Gln Leu Thr Ser
 115 120 125
 Lys Leu Asp Ala Ala Leu Lys Leu Ala Tyr Glu Ala Ala Gln Gly Ala
 130 135 140
 Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Thr Glu Ala
 145 150 155 160
 Leu Arg Val Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala
 165 170 175
 Ala Glu Glu Val Lys Val Gly Ala Ile Pro Ala Ala Glu Val Gln Leu
 180 185 190
 Ile Asp Lys Val Asp Ala Ala Tyr Arg Thr Ala Ala Thr Ala Ala Asn
 195 200 205
 Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Asn Thr Phe Asn
 210 215 220
 Asn Ala Ile Lys Val Ser Leu Gly Ala Ala Tyr Asp Ser Tyr Lys Phe
 225 230 235 240
 Ile Pro Thr Leu Val Ala Val Lys Gln Ala Tyr Ala Ala Lys Gln
 245 250 255
 Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Ser Glu Thr Ala Leu Lys
 260 265 270
 Lys Ala Val Thr Ala Met Ser Glu Ala Glu Lys Glu Ala Thr Pro Ala
 275 280 285
 Ala Ala Ala Thr Ala Thr Pro Thr Pro Ala Ala Ala Thr Ala Thr Ala

290 295 300
 Thr Pro Ala Ala Ala Tyr Ala Thr Ala Thr Pro Ala Ala Ala Thr Ala
 305 310 315 320
 Thr Ala Thr Pro Ala Ala Ala Thr Ala Thr Pro Ala Ala Ala Gly Gly
 325 330 335
 Tyr Lys Val

<210> 117
 <211> 158
 <212> PRT
 <213> Malus domestica (Apple) (Malus sylvestris)

<400> 117
 Gly Val Tyr Thr Phe Glu Asn Glu Phe Thr Ser Glu Ile Pro Pro Ser
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Ile Pro Lys
 20 25 30
 Ile Ala Pro Gln Ala Ile Lys Gln Ala Glu Ile Leu Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
 50 55 60
 Gly Tyr Val Lys His Arg Ile Asp Ser Ile Asp Glu Ala Ser Tyr Ser
 65 70 75 80
 Tyr Ser Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
 85 90 95
 Lys Ile Ser Tyr Glu Thr Lys Leu Val Ala Cys Gly Ser Gly Ser Thr
 100 105 110
 Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asn Ile Glu Ile Lys
 115 120 125
 Glu Glu His Val Lys Val Gly Lys Glu Lys Ala His Gly Leu Phe Lys
 130 135 140
 Leu Ile Glu Ser Tyr Leu Lys Asp His Pro Asp Ala Tyr Asn
 145 150 155

<210> 118
 <211> 133
 <212> PRT
 <213> Mercurialis annua (Annual mercury)

<400> 118
 Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
 1 5 10 15
 Gly Gln Gly Gln His Leu Ala Ala Ala Ser Ile Val Gly His Asp Gly
 20 25 30
 Ser Ile Trp Ala Gln Ser Ala Ser Phe Pro Gln Leu Lys Pro Glu Glu
 35 40 45
 Ile Thr Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro
 50 55 60
 Thr Gly Leu Tyr Ile Ala Gly Thr Lys Tyr Met Val Ile Gln Gly Glu
 65 70 75 80
 Ser Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile
 85 90 95
 Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val
 100 105 110

Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
 115 120 125
 Ile Glu Gln Gly Met
 130

<210> 119
 <211> 274
 <212> PRT
 <213> *Metapenaeus ensis* (Greasyback shrimp) (Sand shrimp)

<400> 119
 Met Lys Leu Glu Lys Asp Asn Ala Met Asp Arg Ala Asp Thr Leu Glu
 1 5 10 15
 Gln Gln Asn Lys Glu Ala Asn Asn Arg Ala Glu Lys Ser Glu Glu Glu
 20 25 30
 Val His Asn Leu Gln Lys Arg Met Gln Gln Leu Glu Asn Asp Leu Asp
 35 40 45
 Gln Val Gln Glu Ser Leu Leu Lys Ala Asn Asn Gln Leu Val Glu Lys
 50 55 60
 Asp Lys Ala Leu Ser Asn Ala Glu Gly Glu Val Ala Ala Leu Asn Arg
 65 70 75 80
 Arg Ile Gln Leu Leu Glu Glu Asp Leu Glu Arg Ser Glu Glu Arg Leu
 85 90 95
 Asn Thr Ala Thr Thr Lys Leu Ala Glu Ala Ser Gln Ala Ala Asp Glu
 100 105 110
 Ser Glu Arg Met Arg Lys Val Leu Glu Asn Arg Ser Leu Ser Asp Glu
 115 120 125
 Glu Arg Met Asp Ala Leu Glu Asn Gln Leu Lys Glu Ala Arg Phe Leu
 130 135 140
 Ala Glu Glu Ala Asp Arg Lys Tyr Asp Glu Val Ala Arg Lys Leu Ala
 145 150 155 160
 Met Val Glu Ala Asp Leu Glu Arg Ala Glu Arg Ala Glu Thr Gly
 165 170 175
 Glu Ser Lys Ile Val Glu Leu Glu Glu Glu Leu Arg Val Val Gly Asn
 180 185 190
 Asn Leu Lys Ser Leu Glu Val Ser Glu Glu Lys Ala Asn Gln Arg Glu
 195 200 205
 Glu Ala Tyr Lys Lys Glu Gln Ile Lys Thr Leu Thr Asn Lys Leu Lys Ala
 210 215 220
 Ala Glu Ala Arg Ala Glu Phe Ala Glu Arg Ser Val Gln Lys Leu Gln
 225 230 235 240
 Lys Glu Val Asp Arg Leu Glu Asp Glu Leu Val Asn Glu Lys Glu Lys
 245 250 255
 Tyr Lys Ser Ile Thr Asp Glu Leu Asp Gln Thr Phe Ser Glu Leu Ser
 260 265 270
 Gly Tyr

<210> 120
 <211> 180
 <212> PRT
 <213> *Mus musculus* (Mouse)

<400> 120
 Met Lys Met Leu Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys Val

Glu Ser Asp Ala Val Gly Phe Ala Asp Ala Val Gly Glu Ala Asp Pro
 35 40 45
 Ile Asp Trp Lys Lys Val Asp Trp Lys Lys Val Ser Lys Lys Thr Cys
 50 55 60
 Lys Val Met Leu Lys Ala Cys Lys Phe Leu Gly
 65 70 75

<210> 123
 <211> 145
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 123
 Glu Asp Ile Pro Gln Pro Pro Val Ser Gln Phe His Ile Gln Gly Gln
 1 5 10 15
 Val Tyr Cys Asp Thr Cys Arg Ala Gly Phe Ile Thr Glu Leu Ser Glu
 20 25 30
 Phe Ile Pro Gly Ala Ser Leu Arg Leu Gln Cys Lys Asp Lys Glu Asn
 35 40 45
 Gly Asp Val Thr Phe Thr Glu Val Gly Tyr Thr Arg Ala Glu Gly Leu
 50 55 60
 Tyr Ser Met Leu Val Glu Arg Asp His Lys Asn Glu Phe Cys Glu Ile
 65 70 75 80
 Thr Leu Ile Ser Ser Gly Arg Lys Asp Cys Asn Glu Ile Pro Thr Glu
 85 90 95
 Gly Trp Ala Lys Pro Ser Leu Lys Phe Lys Leu Asn Thr Val Asn Gly
 100 105 110
 Thr Thr Arg Thr Val Asn Pro Leu Gly Phe Phe Lys Lys Glu Ala Leu
 115 120 125
 Pro Lys Cys Ala Gln Val Tyr Asn Lys Leu Gly Met Tyr Pro Pro Asn
 130 135 140
 Met
 145

<210> 124
 <211> 24
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 124
 Ala Phe Ala Asn Thr Gly Val Glu Ile Val Ser Ile Asp Thr Tyr Leu
 1 5 10 15
 Phe Ser Leu Tyr Asp Glu Asp Lys
 20

<210> 125
 <211> 29
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 125
 Val Lys Ala Val Thr Val Leu Asn Ser Ser Glu Gly Pro His Gly Ile
 1 5 10 15
 Val Tyr Phe Ala Gln Glu Gly Asp Gly Pro Thr Thr Val

<210> 126
 <211> 19
 <212> PRT
 <213> Olea europaea (Common olive)

<220>
 <221> UNSURE
 <222> 14, 16
 <223> Xaa = any amino acid

<400> 126
 Ala Pro Ser Gln Gly Thr Val Thr Ala Lys Leu Thr Ser Xaa Val Xaa
 1 5 10 15
 Tyr Lys Asp

<210> 127
 <211> 263
 <212> PRT
 <213> Oryza sativa (Rice)

<400> 127
 Met Ala Ser Ser Ser Leu Leu Leu Ala Cys Val Val Val Ala Ala Met
 1 5 10 15
 Val Ser Pro Ser Pro Ala Gly His Pro Lys Val Pro Pro Gly Pro Asn
 20 25 30
 Ile Thr Thr Ser Tyr Gly Asp Lys Trp Leu Glu Ala Arg Pro Pro Gly
 35 40 45
 Met Val Arg Pro Arg Val Leu Ala Pro Lys Asp Asn Gly Gly Ala Cys
 50 55 60
 Gly Tyr Lys Asp Val Asp Lys Ala Pro Phe Leu Gly Met Asn Ser Cys
 65 70 75 80
 Gly Asn Asp Pro Ile Phe Lys Asp Gly Lys Gly Cys Gly Ser Cys Phe
 85 90 95
 Glu Ile Lys Cys Ser Lys Pro Glu Ala Cys Ser Asp Lys Pro Ala Leu
 100 105 110
 Ile His Val Thr Asp Met Asn Asp Glu Pro Ile Ala Ala Tyr His Phe
 115 120 125
 Asp Leu Ser Gly Leu Ala Met Ala Lys Asp Gly Lys Asp Glu Glu Leu
 130 135 140
 Arg Lys Ala Gly Ile Ile Asp Thr Gln Phe Arg Arg Val Lys Cys Lys
 145 150 155 160
 Tyr Pro Ala Asp Thr Lys Ile Thr Phe His Ile Glu Lys Ala Ser Asn
 165 170 175
 Pro Asn Tyr Leu Ala Leu Leu Val Lys Tyr Val Ala Gly Asp Gly Asp
 180 185 190
 Val Val Glu Val Glu Ile Lys Glu Lys Gly Ser Glu Glu Trp Lys Ala
 195 200 205
 Leu Lys Glu Ser Trp Gly Ala Ile Trp Arg Ile Asp Thr Pro Lys Pro
 210 215 220
 Leu Lys Gly Pro Phe Ser Val Arg Val Thr Thr Glu Gly Ala Arg Arg
 225 230 235 240
 Ser Ser Ala Glu Asp Ala Ile Pro Asp Pro Gly Arg Arg Gln Arg Val

Gln Val Asn Val Gln Ala Lys
260

250

255

<210> 128
<211> 139
<212> PRT
<213> Parietaria judaica

<400> 128
Gln Glu Thr Cys Gly Thr Met Val Arg Ala Leu Met Pro Cys Leu Pro
1 5 10 15
Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys Gly Cys Cys Ser Gly
20 25 30
Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly Pro Gln Arg Val His
35 40 45
Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr Tyr Ser Asp Ile Asp
50 55 60
Gly Lys Leu Val Ser Glu Val Pro Lys His Cys Gly Ile Val Asp Ser
65 70 75 80
Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys Lys Thr Val Gly Val
85 90 95
Val Pro Arg Gln Pro Gln Leu Pro Val Ser Leu Arg His Gly Pro Val
100 105 110
Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg Leu Glu Arg Pro Gln
115 120 125
Ile Arg Val Pro Pro Pro Ala Pro Glu Lys Ala
130 135

<210> 129
<211> 176
<212> PRT
<213> Parietaria judaica

<400> 129
Met Arg Thr Val Ser Ala Pro Ser Ala Val Ala Leu Val Val Ile Val
1 5 10 15
Ala Ala Gly Leu Ala Trp Thr Ser Leu Ala Ser Val Ala Pro Pro Ala
20 25 30
Pro Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Arg Ala Leu
35 40 45
Met Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys
50 55 60
Gly Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly
65 70 75 80
Leu Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr
85 90 95
Tyr Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys
100 105 110
Gly Ile Val Asp Ser Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys
115 120 125
Lys Thr Leu Gly Val Val Pro Arg Gln Pro Gln Leu Pro Val Ser Leu
130 135 140
Arg His Gly Pro Val Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg
145 150 155 160

Leu Glu Arg Pro Gln Ile Arg Val Pro Pro Pro Ala Pro Glu Lys Ala
 165 170 175

<210> 130
 <211> 138
 <212> PRT
 <213> Parietaria judaica

<400> 130
 Met Arg Thr Val Ser Ala Arg Ser Ser Val Ala Leu Val Val Ile Val
 1 5 10 15
 Ala Ala Val Leu Val Trp Thr Ser Ser Ala Ser Val Ala Pro Ala Pro
 20 25 30
 Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Gly Ala Leu Met
 35 40 45
 Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys Gly
 50 55 60
 Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly Pro
 65 70 75 80
 Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr Tyr
 85 90 95
 Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys Gly
 100 105 110
 Ile Val Asp Ser Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys Lys
 115 120 125
 Thr Leu Gly Val Leu His Tyr Lys Gly Asn
 130 135

<210> 131
 <211> 133
 <212> PRT
 <213> Parietaria judaica

<400> 131
 Met Arg Thr Val Ser Met Ala Ala Leu Val Val Ile Ala Ala Ala Leu
 1 5 10 15
 Ala Trp Thr Ser Ser Ala Glu Pro Ala Pro Ala Pro Ala Pro Gly Glu
 20 25 30
 Glu Ala Cys Gly Lys Val Val Gln Asp Ile Met Pro Cys Leu His Phe
 35 40 45
 Val Lys Gly Glu Glu Lys Glu Pro Ser Lys Glu Cys Cys Ser Gly Thr
 50 55 60
 Lys Lys Leu Ser Glu Glu Val Lys Thr Thr Glu Gln Lys Arg Glu Ala
 65 70 75 80
 Cys Lys Cys Ile Val Arg Ala Thr Lys Gly Ile Ser Gly Ile Lys Asn
 85 90 95
 Glu Leu Val Ala Glu Val Pro Lys Lys Cys Asp Ile Lys Thr Thr Leu
 100 105 110
 Pro Pro Ile Thr Ala Asp Phe Asp Cys Ser Lys Ile Gln Ser Thr Ile
 115 120 125
 Phe Arg Gly Tyr Tyr
 130

<210> 132

<211> 133
 <212> PRT
 <213> Parietaria judaica

<400> 132
 Met Arg Thr Val Ser Met Ala Ala Leu Val Val Ile Ala Ala Ala Leu
 1 5 10 15
 Ala Trp Thr Ser Ser Ala Glu Leu Ala Ser Ala Pro Ala Pro Gly Glu
 20 25 30
 Gly Pro Cys Gly Lys Val Val His His Ile Met Pro Cys Leu Lys Phe
 35 40 45
 Val Lys Gly Glu Glu Lys Glu Pro Ser Lys Ser Cys Cys Ser Gly Thr
 50 55 60
 Lys Lys Leu Ser Glu Glu Val Lys Thr Thr Glu Gln Lys Arg Glu Ala
 65 70 75 80
 Cys Lys Cys Ile Val Ala Ala Thr Lys Gly Ile Ser Gly Ile Lys Asn
 85 90 95
 Glu Leu Val Ala Glu Val Pro Lys Lys Cys Gly Ile Thr Thr Thr Leu
 100 105 110
 Pro Pro Ile Thr Ala Asp Phe Asp Cys Ser Lys Ile Glu Ser Thr Ile
 115 120 125
 Phe Arg Gly Tyr Tyr
 130

<210> 133
 <211> 269
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 133
 Met Met Lys Met Val Cys Ser Ser Ser Ser Ser Ser Leu Leu Val Val
 1 5 10 15
 Ala Ala Leu Leu Ala Val Phe Val Gly Ser Ala Gln Gly Ile Ala Lys
 20 25 30
 Val Pro Pro Gly Pro Asn Ile Thr Ala Glu Tyr Gly Asp Lys Trp Leu
 35 40 45
 Asp Ala Lys Ser Thr Trp Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys
 50 55 60
 Asp Asn Gly Gly Ala Cys Gly Tyr Lys Asp Val Asp Lys Ala Pro Phe
 65 70 75 80
 Asn Gly Met Thr Gly Cys Gly Asn Thr Pro Ile Phe Lys Asp Gly Arg
 85 90 95
 Gly Cys Gly Ser Cys Phe Glu Leu Lys Cys Ser Lys Pro Glu Ser Cys
 100 105 110
 Ser Gly Glu Pro Ile Thr Val His Ile Thr Asp Asp Asn Glu Glu Pro
 115 120 125
 Ile Ala Pro Tyr His Phe Asp Leu Ser Gly His Ala Phe Gly Ser Met
 130 135 140
 Ala Lys Lys Gly Glu Glu Asn Val Arg Gly Ala Gly Glu Leu Glu
 145 150 155 160
 Leu Gln Phe Arg Arg Val Lys Cys Lys Tyr Pro Asp Gly Thr Lys Pro
 165 170 175
 Thr Phe His Val Glu Lys Gly Ser Asn Pro Asn Tyr Leu Ala Leu Leu
 180 185 190
 Val Lys Tyr Val Asp Gly Asp Gly Asp Val Val Ala Val Asp Ile Lys
 195 200 205

<210> 135
 <211> 305
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 135
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Leu Tyr Ala Gly Asp Gly Tyr Ala Pro Ala
 20 25 30
 Thr Pro Ala Ala Ser Ala Thr Leu Ala Thr Pro Ala Thr Pro Ala Ala
 35 40 45
 Ser Pro Gln His Ala Gly Thr Thr Glu Tyr His Ile Val Arg Lys Ala
 50 55 60
 Gly Leu Asn Glu Glu Lys Asn Ala Ala Arg Gln Thr Asp Asp Glu Gln
 65 70 75 80
 Lys Arg Ser Asp Glu Ile Asn Cys Pro Asp Phe Asn Lys Ser Val His
 85 90 95
 Cys Arg Ala Asp Arg Leu Pro Val Cys Ser Ser Thr Ser Ala His Ser
 100 105 110
 Ser Lys Gln Asp Val Ala Trp Met Leu Gly Tyr Gly Ser Ile Gln Gly
 115 120 125
 Phe Ser Met Asp Asp Ala Ser Val Gly Ser Val Ser Ser Glu Phe His
 130 135 140
 Val Ile Glu Ser Ala Ile Glu Val Ile Thr Tyr Ile Gly Glu Glu Val
 145 150 155 160
 Lys Val Ile Pro Ala Gly Glu Val Glu Val Ile Asn Lys Val Lys Ala
 165 170 175
 Ala Phe Ser Thr Ala Ala Thr Ala Ala Asp Glu Ala Pro Ala Asn Asp
 180 185 190
 Lys Phe Thr Val Phe Val Ser Ser Phe Asn Lys Ala Ile Lys Glu Thr
 195 200 205
 Thr Gly Gly Ala Tyr Ala Gly Tyr Lys Phe Ile Pro Thr Leu Glu Ala
 210 215 220
 Ala Val Lys Gln Ala Tyr Ala Ala Ser Ser Ala Thr Ala Pro Glu Val
 225 230 235 240
 Lys Tyr Ala Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Ser Ala Met
 245 250 255
 Ser Glu Ala Gln Lys Glu Ala Lys Pro Ala Ala Ala Ile Ser Ala Ala
 260 265 270
 Thr Thr Thr Ile Ser Ala Ser Thr Ala Thr Pro Ala Ala Pro Pro Pro
 275 280 285
 Pro Gln Leu Gly Thr Ala Thr Pro Ala Ala Val Ala Gly Gly Tyr Lys
 290 295 300
 Val
 305

<210> 136
 <211> 294
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 136
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Ala Met Ala Leu
 1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Thr Pro Pro
 20 25 30
 Thr Pro Ala Thr Pro Ala Val Pro Gly Ala Ala Ala Gly Lys Ala Thr
 35 40 45
 Thr His Glu Gln Lys Leu Ile Glu Asp Ile Asn Ala Ala Phe Lys Trp
 50 55 60
 Trp Pro Ala Ser Ala Pro Pro Ala Asp Lys Tyr Lys Thr Phe Glu Thr
 65 70 75 80
 Ala Phe Ser Lys Ala Asn Ile Ala Gly Ala Ser Thr Lys Gly Leu Asp
 85 90 95
 Ala Ala Tyr Ser Val Val Tyr Asn Thr Ala Ala Gly Ala Thr Pro Glu
 100 105 110
 Ala Lys Tyr Asp Ser Phe Val Thr Ala Leu Thr Glu Ala Leu Arg Ile
 115 120 125
 Met Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Thr Glu Glu
 130 135 140
 Glu Val Pro Ser Ala Lys Ile Leu Arg Ala Asn Ser Arg Ser Ser Thr
 145 150 155 160
 Arg Ser Ser Arg Phe Lys Ile Ala Ala Thr Val Ala Thr Pro Leu Ser
 165 170 175
 His Ser Thr Ala Ala Asn Ser Ala Pro Ala Asn Asp Lys Phe Thr Val
 180 185 190
 Phe Glu Gly Ala Phe Asn Lys Ala Ile Lys Glu Arg His Gly Gly Pro
 195 200 205
 Thr Glu Thr Tyr Lys Phe Ile Pro Ser Leu Glu Ala Ala Val Lys Gln
 210 215 220
 Ala Tyr Gly Ala Thr Val Ala Arg Ala Pro Glu Val Lys Tyr Ala Val
 225 230 235 240
 Phe Glu Ala Gly Leu Thr Lys Ala Ile Thr Ala Met Ser Glu Ala Gln
 245 250 255
 Lys Val Ala Lys Pro Val Arg Leu Ser Pro Gln Pro Pro Gln Val Leu
 260 265 270
 Pro Leu Ala Ala Gly Gly Ala Ala Thr Val Ala Ala Ala Ser Asp Ser
 275 280 285
 Arg Gly Gly Tyr Lys Val
 290

<210> 137

<211> 175

<212> PRT

<213> Phalaris aquatica (Canary grass)

<400> 137

Ala Lys Tyr Asp Ala Phe Ile Ala Ala Leu Thr Glu Ala Leu Arg Val
 1 5 10 15
 Ile Ala Gly Ala Phe Glu Val His Ala Val Lys Pro Ala Thr Glu Glu
 20 25 30
 Val Pro Ala Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Val Asp Lys
 35 40 45
 Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ser Ala Pro
 50 55 60
 Ala Asn Asp Lys Phe Thr Val Phe Glu Gly Ala Phe Asn Lys Ala Ile
 65 70 75 80
 Lys Glu Arg His Gly Gly Ala Tyr Glu Thr Tyr Lys Phe Ile Pro Ser
 85 90 95
 Leu Glu Ala Ser Arg Ser Lys Gln Ala Tyr Gly Ala Thr Val Ala Arg

100 105 110
 Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Gly Leu Thr Lys Ala
 115 120 125
 Ile Thr Ala Met Ser Glu Ala Gln Lys Val Ala Lys Pro Val Arg Ser
 130 135 140
 Val Thr Ala Ala Ala Ala Gly Ala Ala Thr Ala Ala Gly Gly Ala Ala
 145 150 155 160
 Thr Val Ala Ala Ser Arg Pro Thr Ser Ala Gly Gly Tyr Lys Val
 165 170 175

<210> 138
 <211> 263
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 138
 Met Ala Ser Ser Ser Ser Val Leu Leu Val Val Val Leu Phe Ala Val
 1 5 10 15
 Phe Leu Gly Ser Ala Tyr Gly Ile Pro Lys Val Pro Pro Gly Pro Asn
 20 25 30
 Ile Thr Ala Thr Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp
 35 40 45
 Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys
 50 55 60
 Gly Tyr Lys Asp Val Asp Lys Pro Pro Phe Ser Gly Met Thr Gly Cys
 65 70 75 80
 Gly Asn Thr Pro Ile Phe Lys Ser Gly Arg Gly Cys Gly Ser Cys Phe
 85 90 95
 Glu Ile Lys Cys Thr Lys Pro Glu Ala Cys Ser Gly Glu Pro Val Val
 100 105 110
 Val His Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr His Phe
 115 120 125
 Asp Leu Ser Gly His Ala Phe Gly Ala Met Ala Lys Lys Gly Asp Glu
 130 135 140
 Gln Lys Leu Arg Ser Ala Gly Glu Leu Glu Leu Gln Phe Arg Arg Val
 145 150 155 160
 Lys Cys Lys Tyr Pro Glu Gly Thr Lys Val Thr Phe His Val Glu Lys
 165 170 175
 Gly Ser Asn Pro Asn Tyr Leu Ala Leu Leu Val Lys Tyr Val Asn Gly
 180 185 190
 Asp Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys Asp Lys
 195 200 205
 Trp Ile Glu Leu Lys Glu Ser Trp Gly Ala Ile Trp Arg Ile Asp Thr
 210 215 220
 Pro Asp Lys Leu Thr Gly Pro Phe Thr Val Arg Tyr Thr Thr Glu Gly
 225 230 235 240
 Gly Thr Lys Thr Glu Ala Glu Asp Val Ile Pro Glu Gly Trp Lys Ala
 245 250 255
 Asp Thr Ser Tyr Glu Ser Lys
 260

<210> 139
 <211> 122
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 139

Met	Ser	Met	Ala	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Leu	Leu	Ala	Met	Ala	Val
1				5						10					15	
Leu	Ala	Ala	Leu	Phe	Ala	Gly	Ala	Trp	Cys	Val	Pro	Lys	Val	Thr	Phe	
			20					25					30			
Thr	Val	Glu	Lys	Gly	Ser	Asn	Glu	Lys	His	Leu	Ala	Val	Leu	Val	Lys	
		35					40					45				
Tyr	Glu	Gly	Asp	Thr	Met	Ala	Glu	Val	Glu	Leu	Arg	Glu	His	Gly	Ser	
	50					55					60					
Asp	Glu	Trp	Val	Ala	Met	Thr	Lys	Gly	Glu	Gly	Gly	Val	Trp	Thr	Phe	
65					70					75					80	
Asp	Ser	Glu	Glu	Pro	Leu	Gln	Gly	Pro	Phe	Asn	Phe	Arg	Phe	Leu	Thr	
				85					90					95		
Glu	Lys	Gly	Met	Lys	Asn	Val	Phe	Asp	Asp	Val	Val	Pro	Glu	Lys	Tyr	
			100					105					110			
Thr	Ile	Gly	Ala	Thr	Tyr	Ala	Pro	Glu	Glu							
		115					120									

<210> 140

<211> 286

<212> PRT

<213> Phleum pratense (Common timothy)

<400> 140

Ala	Asp	Leu	Gly	Tyr	Gly	Pro	Ala	Thr	Pro	Ala	Ala	Pro	Ala	Ala	Gly	
1				5					10						15	
Tyr	Thr	Pro	Ala	Thr	Pro	Ala	Ala	Pro	Ala	Gly	Ala	Asp	Ala	Ala	Gly	
			20					25					30			
Lys	Ala	Thr	Thr	Glu	Glu	Gln	Lys	Leu	Ile	Glu	Lys	Ile	Asn	Ala	Gly	
		35					40					45				
Phe	Lys	Ala	Ala	Leu	Ala	Gly	Ala	Gly	Val	Gln	Pro	Ala	Asp	Lys	Tyr	
	50					55				60						
Arg	Thr	Phe	Val	Ala	Thr	Phe	Gly	Pro	Ala	Ser	Asn	Lys	Ala	Phe	Ala	
65					70				75						80	
Glu	Gly	Leu	Ser	Gly	Glu	Pro	Lys	Gly	Ala	Ala	Glu	Ser	Ser	Ser	Lys	
				85					90					95		
Ala	Ala	Leu	Thr	Ser	Lys	Leu	Asp	Ala	Ala	Tyr	Lys	Leu	Ala	Tyr	Lys	
			100				105						110			
Thr	Ala	Glu	Gly	Ala	Thr	Pro	Glu	Ala	Lys	Tyr	Asp	Ala	Tyr	Val	Ala	
		115					120					125				
Thr	Leu	Ser	Glu	Ala	Leu	Arg	Ile	Ile	Ala	Gly	Thr	Leu	Glu	Val	His	
	130					135					140					
Ala	Val	Lys	Pro	Ala	Ala	Glu	Glu	Val	Lys	Val	Ile	Pro	Ala	Gly	Glu	
145					150					155					160	
Leu	Gln	Val	Ile	Glu	Lys	Val	Asp	Ala	Ala	Phe	Lys	Val	Ala	Ala	Thr	
				165					170					175		
Ala	Ala	Asn	Ala	Ala	Pro	Ala	Asn	Asp	Lys	Phe	Thr	Val	Phe	Glu	Ala	
			180				185						190			
Ala	Phe	Asn	Asp	Glu	Ile	Lys	Ala	Ser	Thr	Gly	Gly	Ala	Tyr	Glu	Ser	
		195					200					205				
Tyr	Lys	Phe	Ile	Pro	Ala	Leu	Glu	Ala	Ala	Val	Lys	Gln	Ala	Tyr	Ala	
	210					215					220					
Ala	Thr	Val	Ala	Thr	Ala	Pro	Glu	Val	Lys	Tyr	Thr	Val	Phe	Glu	Thr	
225					230					235					240	
Ala	Leu	Lys	Lys	Ala	Ile	Thr	Ala	Met	Ser	Glu	Ala	Gln	Lys	Ala	Ala	

				245						250						255	
Lys	Pro	Ala	Ala	Ala	Ala	Thr	Ala	Thr	Ala	Thr	Ala	Ala	Val	Gly	Ala		
			260						265				270				
Ala	Thr	Gly	Ala	Ala	Thr	Ala	Ala	Thr	Gly	Gly	Tyr	Lys	Val				
		275					280					285					

<210> 141
 <211> 284
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 141																	
Ala	Ala	Ala	Ala	Val	Pro	Arg	Arg	Gly	Pro	Arg	Gly	Gly	Pro	Gly	Arg		
1				5					10					15			
Ser	Tyr	Thr	Ala	Asp	Ala	Gly	Tyr	Ala	Pro	Ala	Thr	Pro	Ala	Ala	Ala		
			20					25					30				
Gly	Ala	Ala	Ala	Gly	Lys	Ala	Thr	Thr	Glu	Glu	Gln	Lys	Leu	Ile	Glu		
			35				40					45					
Asp	Ile	Asn	Val	Gly	Phe	Lys	Ala	Ala	Val	Ala	Ala	Ala	Ala	Ser	Val		
			50				55				60						
Pro	Ala	Ala	Asp	Lys	Phe	Lys	Thr	Phe	Glu	Ala	Ala	Phe	Thr	Ser	Ser		
65					70				75					80			
Ser	Lys	Ala	Ala	Ala	Ala	Lys	Ala	Pro	Gly	Leu	Val	Pro	Lys	Leu	Asp		
				85					90					95			
Ala	Ala	Tyr	Ser	Val	Ala	Tyr	Lys	Ala	Ala	Val	Gly	Ala	Thr	Pro	Glu		
			100				105						110				
Ala	Lys	Phe	Asp	Ser	Phe	Val	Ala	Ser	Leu	Thr	Glu	Ala	Leu	Arg	Val		
		115					120				125						
Ile	Ala	Gly	Ala	Leu	Glu	Val	His	Ala	Val	Lys	Pro	Val	Thr	Glu	Glu		
		130				135					140						
Pro	Gly	Met	Ala	Lys	Ile	Pro	Ala	Gly	Glu	Leu	Gln	Ile	Ile	Asp	Lys		
145					150				155					160			
Ile	Asp	Ala	Ala	Phe	Lys	Val	Ala	Ala	Thr	Ala	Ala	Ala	Thr	Ala	Pro		
				165					170					175			
Ala	Asp	Asp	Lys	Phe	Thr	Val	Phe	Glu	Ala	Ala	Phe	Asn	Lys	Ala	Ile		
			180					185				190					
Lys	Glu	Ser	Thr	Gly	Gly	Ala	Tyr	Asp	Thr	Tyr	Lys	Cys	Ile	Pro	Ser		
		195				200						205					
Leu	Glu	Ala	Ala	Val	Lys	Gln	Ala	Tyr	Ala	Ala	Thr	Val	Ala	Ala	Ala		
		210				215					220						
Pro	Gln	Val	Lys	Tyr	Ala	Val	Phe	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Ile		
225					230				235					240			
Thr	Ala	Met	Ser	Glu	Val	Gln	Lys	Val	Ser	Gln	Pro	Ala	Thr	Gly	Ala		
				245					250					255			
Ala	Thr	Val	Ala	Ala	Gly	Ala	Ala	Thr	Thr	Ala	Ala	Gly	Ala	Ala	Ser		
			260					265					270				
Gly	Ala	Ala	Thr	Val	Ala	Ala	Gly	Gly	Tyr	Lys	Val						
		275					280										

<210> 142
 <211> 132
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 142

35 40 45
 Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 145
 <211> 131
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 145
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Phe Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
 35 40 45
 Gly Ile Met Lys Asp Leu Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Ala Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 146
 <211> 373
 <212> PRT
 <213> Poa pratensis (Kentucky bluegrass)

<400> 146
 Met Asp Lys Ala Asn Gly Ala Tyr Lys Thr Ala Leu Lys Ala Ala Ser
 1 5 10 15
 Ala Val Ala Pro Ala Glu Lys Phe Pro Val Phe Gln Ala Thr Phe Asp
 20 25 30
 Lys Asn Leu Lys Glu Gly Leu Ser Gly Pro Asp Ala Val Gly Phe Ala
 35 40 45
 Lys Lys Leu Asp Ala Phe Ile Gln Thr Ser Tyr Leu Ser Thr Lys Ala
 50 55 60
 Ala Glu Pro Lys Glu Lys Phe Asp Leu Phe Val Leu Ser Leu Thr Glu
 65 70 75 80

<210> 150
 <211> 206
 <212> PRT
 <213> Polistes dominulus (European paper wasp)

<400> 150
 Asn Asp Tyr Cys Lys Ile Lys Cys Ser Ser Gly Val His Thr Val Cys
 1 5 10 15
 Gln Tyr Gly Glu Ser Thr Lys Pro Ser Lys Asn Cys Ala Gly Lys Leu
 20 25 30
 Ile Lys Ser Val Gly Pro Thr Glu Glu Lys Lys Leu Ile Val Glu
 35 40 45
 Glu His Asn Arg Phe Arg Gln Lys Val Ala Lys Gly Leu Glu Thr Arg
 50 55 60
 Gly Asn Pro Gly Pro Gln Pro Ala Ala Ser Asn Met Asn Asn Leu Val
 65 70 75 80
 Trp Asn Asp Glu Leu Ala Lys Ile Ala Gln Val Trp Ala Ser Gln Cys
 85 90 95
 Gln Ile Leu Val His Asp Lys Cys Arg Asn Thr Glu Lys Tyr Gln Val
 100 105 110
 Gly Gln Asn Ile Ala Tyr Ala Gly Ser Ser Asn His Phe Pro Ser Val
 115 120 125
 Thr Lys Leu Ile Gln Leu Trp Glu Asn Glu Val Lys Asp Phe Asn Tyr
 130 135 140
 Asn Thr Gly Ile Thr Asn Lys Asn Phe Gly Lys Val Gly His Tyr Thr
 145 150 155 160
 Gln Met Val Trp Gly Asn Thr Lys Glu Val Gly Cys Gly Ser Leu Lys
 165 170 175
 Tyr Val Glu Lys Asn Met Gln Ile His Tyr Leu Ile Cys Asn Tyr Gly
 180 185 190
 Pro Ala Gly Asn Tyr Leu Gly Gln Pro Ile Tyr Thr Lys Lys
 195 200 205

<210> 151
 <211> 205
 <212> PRT
 <213> Polistes exclamans (Paper wasp)

<400> 151
 Val Asp Tyr Cys Lys Ile Lys Cys Pro Ser Gly Ile His Thr Val Cys
 1 5 10 15
 Gln Tyr Gly Glu Ser Thr Lys Pro Ser Lys Asn Cys Ala Gly Lys Val
 20 25 30
 Ile Lys Ser Val Gly Pro Thr Glu Glu Lys Lys Leu Ile Val Ser
 35 40 45
 Glu His Asn Arg Phe Arg Gln Lys Val Ala Gln Gly Leu Glu Thr Arg
 50 55 60
 Gly Asn Pro Gly Pro Gln Pro Ala Ala Ser Asp Met Asn Asp Leu Val
 65 70 75 80
 Trp Asn Asp Glu Leu Ala His Ile Ala Gln Val Trp Ala Ser Gln Cys
 85 90 95
 Gln Phe Leu Val His Asp Lys Cys Arg Asn Thr Ala Lys Tyr Pro Val
 100 105 110

<211> 117
 <212> PRT
 <213> Solenopsis invicta (Red imported fire ant)

<400> 157
 Leu Asp Ile Lys Glu Ile Ser Ile Met Asn Arg Ile Leu Glu Lys Cys
 1 5 10 15
 Ile Arg Thr Val Pro Lys Arg Glu Asn Asp Pro Ile Asn Pro Leu Lys
 20 25 30
 Asn Val Asn Val Leu Tyr Cys Ala Phe Thr Lys Arg Gly Ile Phe Thr
 35 40 45
 Pro Lys Gly Val Asn Thr Lys Gln Tyr Ile Asn Tyr Cys Glu Lys Thr
 50 55 60
 Ile Ile Ser Pro Ala Asp Ile Lys Leu Cys Lys Lys Ile Ala Ser Lys
 65 70 75 80
 Cys Val Lys Lys Val Tyr Asp Arg Pro Gly Pro Val Ile Glu Arg Ser
 85 90 95
 Lys Asn Leu Leu Ser Cys Val Leu Lys Lys Gly Leu Leu Glu Leu Thr
 100 105 110
 Val Tyr Gly Lys Asn
 115

<210> 158
 <211> 119
 <212> PRT
 <213> Solenopsis richteri (Black imported fire ant)

<400> 158
 Asp Ile Glu Ala Gln Arg Val Leu Arg Lys Asp Ile Ala Glu Cys Ala
 1 5 10 15
 Arg Thr Leu Pro Lys Cys Val Asn Gln Pro Asp Asp Pro Leu Ala Arg
 20 25 30
 Val Asp Val Trp His Cys Ala Met Ser Lys Arg Gly Val Tyr Asp Asn
 35 40 45
 Pro Asp Pro Ala Val Val Lys Glu Lys Asn Ser Lys Met Cys Pro Lys
 50 55 60
 Ile Ile Thr Asp Pro Ala Asp Val Glu Asn Cys Lys Lys Val Val Ser
 65 70 75 80
 Arg Cys Val Asp Arg Glu Thr Gln Arg Pro Arg Ser Asn Arg Gln Lys
 85 90 95
 Ala Ile Asn Ile Thr Gly Cys Ile Leu Arg Ala Gly Val Val Glu Ala
 100 105 110
 Thr Val Leu Ala Arg Glu Lys
 115

<210> 159
 <211> 211
 <212> PRT
 <213> Solenopsis richteri (Black imported fire ant)

<400> 159
 Thr Asn Tyr Cys Asn Leu Gln Ser Cys Lys Arg Asn Asn Ala Ile His
 1 5 10 15
 Thr Met Cys Gln Tyr Thr Ser Pro Thr Pro Gly Pro Met Cys Leu Glu
 20 25 30

195

200

<210> 161
 <211> 202
 <212> PRT
 <213> Vespa crabro (European hornet)

<400> 161

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Arg	Ser	Gly	Ile	His	Thr	Leu	Cys
1				5					10					15	
Lys	Tyr	Gly	Thr	Ser	Thr	Lys	Pro	Asn	Cys	Gly	Lys	Asn	Val	Val	Lys
			20					25					30		
Ala	Ser	Gly	Leu	Thr	Lys	Gln	Glu	Asn	Leu	Glu	Ile	Leu	Lys	Gln	His
		35					40					45			
Asn	Glu	Phe	Arg	Gln	Lys	Val	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Asn
	50					55					60				
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Ser	Met	Asn	Thr	Leu	Val	Trp	Asn
65					70					75					80
Asp	Glu	Leu	Ala	Gln	Ile	Ala	Gln	Val	Trp	Ala	Asn	Gln	Cys	Asn	Tyr
				85					90					95	
Gly	His	Asp	Asn	Cys	Arg	Asn	Ser	Ala	Lys	Tyr	Ser	Val	Gly	Gln	Asn
			100					105					110		
Ile	Ala	Glu	Gly	Ser	Thr	Ser	Ala	Asp	Asn	Phe	Val	Asn	Val	Ser	Asn
		115					120					125			
Met	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Gln	Tyr	Gly	Ser
	130					135					140				
Pro	Lys	Asn	Lys	Leu	Asn	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp
145					150					155					160
Ala	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Glu	Asp	Tyr	Ile	Glu	Asp
				165					170					175	
Gly	Trp	His	Arg	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly	Asn
			180					185					190		
Val	Gly	Asn	Glu	Pro	Ile	Tyr	Glu	Arg	Lys						
		195					200								

<210> 162
 <211> 204
 <212> PRT
 <213> Vespa flavopilosa (Yellow jacket) (Wasp)

<400> 162

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala
1				5					10					15	
Cys	Lys	Tyr	Gly	Ser	Leu	Lys	Pro	Asn	Cys	Gly	Asn	Lys	Val	Val	Val
			20					25					30		
Ser	Tyr	Gly	Leu	Thr	Lys	Gln	Glu	Lys	Gln	Asp	Ile	Leu	Lys	Glu	His
		35					40					45			
Asn	Asp	Phe	Arg	Gln	Lys	Ile	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Asn
	50					55					60				
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Lys	Asn	Leu	Val	Trp	Asn
65					70					75					80
Asp	Glu	Leu	Ala	Tyr	Val	Ala	Gln	Val	Trp	Ala	Asn	Gln	Cys	Gln	Tyr
				85					90					95	
Gly	His	Asp	Thr	Cys	Arg	Asp	Ile	Ala	Lys	Tyr	Gln	Val	Gly	Gln	Asn
			100					105					110		

Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Ala	Val	Tyr	Asn	Asp	Pro	Val	Lys
		115						120				125			
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys
		130						135				140			
Lys	Phe	Ser	Glu	Asn	Asn	Phe	Leu	Lys	Ile	Gly	His	Tyr	Thr	Gln	Met
145						150					155				160
Val	Trp	Ala	Asn	Thr	Lys	Glu	Val	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile
				165					170					175	
Gln	Glu	Asn	Trp	His	Lys	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ser
			180					185					190		
Gly	Asn	Phe	Gln	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys				
		195					200								

<210> 166

<211> 204

<212> PRT

<213> *Vespula pensylvanica* (Western yellow jacket) (Wasp)

<400> 166

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala
1				5					10					15	
Cys	Lys	Tyr	Gly	Ser	Leu	Lys	Pro	Asn	Cys	Gly	Asn	Lys	Ile	Val	Val
			20					25					30		
Ser	Tyr	Gly	Leu	Thr	Lys	Glu	Glu	Lys	Gln	Asp	Ile	Leu	Lys	Glu	His
		35				40						45			
Asn	Asp	Phe	Arg	Gln	Lys	Ile	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Asn
50						55					60				
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Lys	Asn	Leu	Val	Trp	Asn
65					70					75					80
Asp	Glu	Leu	Ala	Tyr	Val	Ala	Gln	Val	Trp	Ala	Asn	Gln	Cys	Gln	Tyr
				85					90					95	
Gly	His	Asp	Thr	Cys	Arg	Asp	Val	Ala	Lys	Tyr	Pro	Val	Gly	Gln	Asn
			100					105					110		
Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Asp	Lys	Tyr	Asp	Asn	Pro	Val	Lys
		115					120					125			
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys
		130					135					140			
Lys	Phe	Ser	Glu	Asn	Asn	Phe	Asn	Lys	Ile	Gly	His	Tyr	Thr	Gln	Met
145						150					155				160
Val	Trp	Ala	Asn	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile
				165					170					175	
Gln	Asn	Glu	Trp	His	Lys	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ser
			180					185					190		
Gly	Asn	Phe	Gly	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys				
		195					200								

<210> 167

<211> 205

<212> PRT

<213> *Vespula squamosa* (Southern yellow jacket) (Wasp)

<400> 167

Val	Asp	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala
1				5					10					15	
Cys	Lys	Tyr	Gly	Thr	Ser	Thr	Lys	Pro	Asn	Cys	Gly	Asn	Met	Val	Val

Ser	Asn	His	Cys	Ser	Glu	Arg	Leu	Cys	Glu	Thr	Asp	Ala	Glu	Tyr	Val
210						215					220				
Gln	Ile	Ile	His	Thr	Ser	Asn	Tyr	Leu	Gly	Thr	Glu	Lys	Thr	Leu	Gly
225					230					235					240
Thr	Val	Asp	Phe	Tyr	Met	Asn	Asn	Gly	Lys	Asn	Gln	Pro	Gly	Cys	Gly
				245					250					255	
Arg	Phe	Phe	Ser	Glu	Val	Cys	Ser	His	Ser	Arg	Ala	Val	Ile	Tyr	Met
			260					265					270		
Ala	Glu	Cys	Ile	Lys	His	Glu	Cys	Cys	Leu	Ile	Gly	Ile	Pro	Lys	Ser
		275					280					285			
Lys	Ser	Ser	Gln	Pro	Ile	Ser	Ser	Cys	Thr	Lys	Gln	Glu	Cys	Val	Cys
	290					295					300				
Val	Gly	Leu	Asn	Ala	Lys	Lys	Tyr	Pro	Ser	Arg	Gly	Ser	Phe	Tyr	Val
305					310					315					320
Pro	Val	Glu	Ser	Thr	Ala	Pro	Phe	Cys	Asn	Asn	Lys	Gly	Lys	Ile	Ile
				325					330					335	

<210> 169
 <211> 331
 <212> PRT
 <213> *Vespula vulgaris* (Yellow jacket) (Wasp)

Ser	Glu	Arg	Pro	Lys	Arg	Val	Phe	Asn	Ile	Tyr	Trp	Asn	Val	Pro	Thr
1				5					10					15	
Phe	Met	Cys	His	Gln	Tyr	Asp	Leu	Tyr	Phe	Asp	Glu	Val	Thr	Asn	Phe
			20					25					30		
Asn	Ile	Lys	Arg	Asn	Ser	Lys	Asp	Asp	Phe	Gln	Gly	Asp	Lys	Ile	Ala
		35					40					45			
Ile	Phe	Tyr	Asp	Pro	Gly	Glu	Phe	Pro	Ala	Leu	Leu	Ser	Leu	Lys	Asp
	50					55					60				
Gly	Lys	Tyr	Lys	Lys	Arg	Asn	Gly	Gly	Val	Pro	Gln	Glu	Gly	Asn	Ile
65					70				75					80	
Thr	Ile	His	Leu	Gln	Lys	Phe	Ile	Glu	Asn	Leu	Asp	Lys	Ile	Tyr	Pro
				85					90					95	
Asn	Arg	Asn	Phe	Ser	Gly	Ile	Gly	Val	Ile	Asp	Phe	Glu	Arg	Trp	Arg
			100					105					110		
Pro	Ile	Phe	Arg	Gln	Asn	Trp	Gly	Asn	Met	Lys	Ile	His	Lys	Asn	Phe
		115					120					125			
Ser	Ile	Asp	Leu	Val	Arg	Asn	Glu	His	Pro	Thr	Trp	Asn	Lys	Lys	Met
	130					135					140				
Ile	Glu	Leu	Glu	Ala	Ser	Lys	Arg	Phe	Glu	Lys	Tyr	Ala	Arg	Phe	Phe
145					150					155				160	
Met	Glu	Glu	Thr	Leu	Lys	Leu	Ala	Lys	Lys	Thr	Arg	Lys	Gln	Ala	Asp
				165					170					175	
Trp	Gly	Tyr	Tyr	Gly	Tyr	Pro	Tyr	Cys	Phe	Asn	Met	Ser	Pro	Asn	Asn
		180						185					190		
Leu	Val	Pro	Glu	Cys	Asp	Val	Thr	Ala	Met	His	Glu	Asn	Asp	Lys	Met
		195					200					205			
Ser	Trp	Leu	Phe	Asn	Asn	Gln	Asn	Val	Leu	Leu	Pro	Ser	Val	Tyr	Val
	210					215					220				
Arg	Gln	Glu	Leu	Thr	Pro	Asp	Gln	Arg	Ile	Gly	Leu	Val	Gln	Gly	Arg
225					230					235					240
Val	Lys	Glu	Ala	Val	Arg	Ile	Ser	Asn	Asn	Leu	Lys	His	Ser	Pro	Lys
				245					250					255	
Val	Leu	Ser	Tyr	Trp	Trp	Tyr	Val	Tyr	Gln	Asp	Glu	Thr	Asn	Thr	Phe

195

200

<210> 173
 <211> 191
 <212> PRT
 <213> Zea mays (Maize)

<400> 173

Met	Thr	Ala	Cys	Gly	Asn	Val	Pro	Ile	Phe	Lys	Asp	Gly	Lys	Gly	Cys
1				5					10					15	
Gly	Ser	Cys	Tyr	Glu	Val	Arg	Cys	Lys	Glu	Lys	Pro	Glu	Cys	Ser	Gly
		20					25					30			
Asn	Pro	Val	Thr	Val	Phe	Ile	Thr	Asp	Met	Asn	Tyr	Glu	Pro	Ile	Ala
		35					40					45			
Pro	Tyr	His	Phe	Asp	Leu	Ser	Gly	Lys	Ala	Phe	Gly	Ser	Leu	Ala	Lys
	50					55					60				
Pro	Gly	Leu	Asn	Asp	Lys	Leu	Arg	His	Cys	Gly	Ile	Met	Asp	Val	Glu
65				70					75					80	
Phe	Arg	Arg	Val	Arg	Cys	Lys	Tyr	Pro	Ala	Gly	Gln	Lys	Ile	Val	Phe
			85						90					95	
His	Ile	Glu	Lys	Gly	Cys	Asn	Pro	Asn	Tyr	Val	Ala	Val	Leu	Val	Lys
		100					105						110		
Phe	Val	Ala	Asp	Asp	Gly	Asp	Ile	Val	Leu	Met	Glu	Ile	Gln	Asp	Lys
	115					120					125				
Leu	Ser	Ala	Glu	Trp	Lys	Pro	Met	Lys	Leu	Ser	Trp	Gly	Ala	Ile	Trp
	130					135					140				
Arg	Met	Asp	Thr	Ala	Lys	Ala	Leu	Lys	Gly	Pro	Phe	Ser	Ile	Arg	Leu
145					150					155					160
Thr	Ser	Glu	Ser	Gly	Lys	Lys	Val	Ile	Ala	Lys	Asp	Ile	Ile	Pro	Ala
			165					170						175	
Asn	Trp	Arg	Pro	Asp	Ala	Val	Tyr	Thr	Ser	Asn	Val	Gln	Phe	Tyr	
		180						185					190		

<210> 174
 <211> 73
 <212> DNA
 <213> Unknown

<220>

<223> Primer sequence

<400> 174

gctcgagggt ggagggcgtt caggcggagg tggctctggc ggtggcggat cggtcaccac 60
 gccacccgtg aag 73

<210> 175
 <211> 33
 <212> DNA
 <213> Unknown

<220>

<223> Primer sequence

<400> 175

ggcggccgct cattaccgg gatttacaga cac

33

<210> 176
<211> 32
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> 1, 4, 11, 12, 27, 30
<223> Xaa = any amino acid

<400> 176
Xaa Gln Gln Xaa Glu Leu Gln Asp Leu Glu Xaa Xaa Gln Ser Gln Leu
1 5 10 15
Glu Asp Ala Asn Leu Arg Pro Arg Glu Gln Xaa Leu Met Xaa Lys Ile
20 25 30

<210> 177
<211> 32
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> 1, 4, 8, 10, 11, 12, 27, 30
<223> Xaa = any amino acid

<400> 177
Xaa Gln Gln Xaa Glu Leu Gln Xaa Asp Xaa Xaa Xaa Gln Ser Gln Leu
1 5 10 15
Glu Arg Ala Asp Leu Arg Pro Gly Glu Gln Xaa Leu Met Xaa Lys Ile
20 25 30

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